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Flying Operations

EC-130H—AIRCREW EVALUATION CRITERIA

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This instruction implements Air Force Policy Directive (AFPD) 11-2, *Aircraft Rules and Procedures.* It establishes evaluation criteria for initial and periodic aircrew qualification for all EC-130H COMPASS CALL aircraft. It is used in conjunction with AFI 11-202V2, *Aircrew Standardization/Evaluation Program*, and MAJCOM supplements thereto. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force. See paragraph 1.2. of this volume for guidance on submitting comments and suggesting improvements to this publication.

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SUMMARY OF CHANGES

This document is substantially revised and must be completely reviewed.

Removed all references to Copilot and replaced with Mobility Pilot. Deleted all references to air refueling (AR) and replaced with air-to-air refueling (AAR). Removed all references and criteria associated with Weapon System Officer (WSO). Updated Airborne Maintenance Technician (AMT) Grading Areas (Table 2.6.). Added AAR as a required INSTM/QUAL item (Table 2.2) for pilots who have not been given an INIT MSN evaluation. Updated COMPASS CALL Mission Crew Grading Areas to include Senior Mission Crew Commander (SRMCC) requirements (Table 2.7.). Para 4.3.3. and 5.3.3.2. added SQ/CC authority for verbal AAR evaluations; Changed para 7.4.9. to read "Trouble Analysis/Corrective Action", references to "In-flight Maintenance" removed due to redundancy; Changed para 7.4.13 to read "Mission Termination","Trouble Analysis/Corrective Action" moved to para 7.4.9.; Changed para 7.4.14 to read "Raids/BP1/BP2/BP3", "Mission Termination" moved to para 7.4.13.; Changed para 7.4.15 to read "RFR", "RF Distribution Subsystem" removed; Changed para 7.4.17 to read "SCM", "Computer Subsystem" removed; Changed para 7.4.20 to read "RFT", "Power Amplifier Subsytem" removed; Changed para 7.4.24 to read "External Communications", "Special Systems Antennas" removed; Changed para 7.4.26 to read "Human-Machine Interface", "DPS" moved to Para 7.4.27; Changed para 7.4.27 to "DPS", removed "Tactical Information Broadcast System (TIBS)"; Changed para 7.4.28 to read "Area 166. SS1/SS2"; Changed 7.4.29. to read "Area 167. AXE", moved "Reverse Taxi to para 7.4.31; . Changed para 7.4.30. to read "Areas 152 through 167" with 7.4.30.1, 7.4.30.2, 7.4.30.3 providing evaluation criteria; Added para 7.4.31; Added para 7.4.32. Added SRMCC crew position and evaluation criteria (Chapter 8). Para 8.3.1.4. removed SQ/CC approval requirement for updating Mission Crew Supervisor (MCS) qualification with Flight Examiner (FE) of like Crew Position Indicator.

Chapter 1

GENERAL INFORMATION

1.1. General. All evaluations will be conducted IAW the provisions of AFI 11-202V2 and this volume.

1.2. Recommended Changes/Waivers. Submit recommendations for changes to this volume on AF IMT 847, *Recommendation for Change of Publication*, IAW AFI 11-215, *Flight Manuals Program*, to ACC/A3TV, through 55 ECG/EGV and 8 AF/OV, for review. ACC/A3TV address is 205 Dodd Blvd, Suite 101, Langley AFB VA 23665-2789. Requests for changes to this publication must be submitted to HQ USAF/A3/5 for approval prior to publication, IAW AFI 33-360, *Publications and Forms Management*. Supplements must be coordinated IAW AFPD 11-2. Forward proposed MAJCOM, DRU, and operational theater supplements to HQ USAF/A3O-AT for approval prior to publication, through ACC/A3TV. Requests for changes to MAJCOM and subordinate supplements must be submitted to ACC OPR for approval prior to publication. Waiver authority for the contents of this AFI is HQ USAF/A3O-A, the AF-level certifying official. Waiver authority for specific individual aircrew requirements is ACC/A3. Forward waiver requests to HQ ACC/A3T through 55 ECG/EGV and 8 AF/OV. Courtesy copy waiver requests to ACC/A3IE.

1.3. Key Words and Definitions:

1.3.1. "Will" and "Shall" indicate a mandatory requirement.

1.3.2. "Should" is normally used to indicate a preferred, but not mandatory, method of accomplishment.

1.3.3. "May" indicates an acceptable or suggested means of accomplishment.

1.3.4. "Note" indicates operating procedures, techniques, etc., considered essential to emphasize.

1.3.5. See attachment 1 for definitions of Deviation, Major and Minor Errors.

1.4. Procedures.

1.4.1. Flight Examiners (FEs) will use the evaluation criteria contained in **Chapter 3** for conducting flight evaluations and **Paragraph 1.6** for emergency procedure evaluations (EPE). To ensure standard and objective evaluations, flight examiners will be thoroughly familiar with the prescribed evaluation criteria.

1.4.2. The examinee or examiner may fly in any seat that will best enable the examiner to conduct a thorough evaluation.

1.4.3. Examiners will brief the examinees on the conduct, purpose, and requirements of the evaluation, including evaluation criteria, prior to flight. The examinee is responsible for all mission planning.

1.4.4. Examiners will thoroughly debrief/critique all aspects of the flight, including the examinee's overall rating, specific deviations, area/sub area grades assigned, and additional training required.

1.4.5. Examiners will not fail equipment during flight evaluations, but may deny the use of systems not affecting safety of flight.

1.5. Grading Instructions: Standards and performance parameters are contained in AFI 11-202V2 and this instruction.

1.5.1. The FE will base tolerances for in-flight parameters on conditions of smooth air and a stable aircraft. Do not consider momentary deviations from tolerances, provided the examinee applies prompt corrective action and such deviations do not jeopardize flying safety. The FE will consider cumulative deviations when determining the overall grade.

1.5.2. The grading system for most areas in this volume is a three-level system (Q/Q-/U). Areas identified as "Critical" in **Table 2.1** through **Table 2.7** have a two-level system (Q/U). A critical area is defined as an area or event in which unsatisfactory performance by the examinee could result in loss of life or damage to equipment. If the examinee receives a U in any critical area, assign an overall Qualification Level 3 (Q-3).

1.5.3. Required areas are indicated with an "R" in **Table 2.1** through **Table 2.7** for specific evaluations. All required areas must be evaluated. Flight examiners may evaluate any other areas observed, at their discretion.

1.5.3.1. When a required area cannot be evaluated in the aircraft due to equipment malfunctions, operational requirements, scheduling restrictions, or weather, that area may be evaluated by an alternate method (simulator, procedural trainer, or verbal examination). Complete the evaluation on an additional flight when, in the examiner's judgment, an item cannot be adequately evaluated by an alternate method.

1.5.3.2. Document the reasons for using alternate methods and the methods used in the Additional Comments portion of the AF Form 8, *Certificate of Aircrew Qualification*.

1.5.3.3. Aircrew may maintain qualification in prior crew positions if applicable evaluation areas are evaluated on subsequent evaluations. For example, Mission Crew Supervisors (MCS) maintain Analysis Operator (ANO) or Acquisition Operator (AO) qualification if additional ANO or AO evaluation areas are evaluated on subsequent MCS evaluations. This also applies to Senior Mission Crew Commanders (SRMCC) who have upgraded from the Mission Crew Commander (MCC) qualification. Annotate additional qualifications maintained in Section D of AF Form 8.

1.5.3.4. Due to the congruity of ANO and AO duties aboard the EC-130H, an MCS evaluator may administer an evaluation updating an examinee’s MCS and ANO or AO qualification, regardless of evaluator’s crew position indicator. The Aural Recognition Test (ART) demonstrates the MCS’ qualification in language- or signal-specific skills.

1.5.4. The examiner will compare examinee's performance for each area with the standards provided in this volume and assign an appropriate grade. Derive the overall evaluation grade from the area grades based on a composite for the observed events and tasks IAW AFI 11-202V2 and this volume.

1.5.4.1. FEs will use the grading criteria in this volume to determine individual area grades. FE judgment must be exercised when the wording of areas is subjective and when specific situations are not covered.

1.5.4.2. Flight examiner judgment will be the determining factor in arriving at the overall grade.

1.6. Emergency Procedures Evaluation. The EPE is a ground requisite on all MSN and Qual evaluations. Document the EPE on ACC Form 180, *Temporary Flight Evaluation Certificate*. Grading criteria for each required item are listed in **Chapter 3**. This evaluation will include areas commensurate with examinee's Ready Aircrew Program (RAP) training level and event qualifications.

1.6.1. The following items are required on all emergency procedure evaluations:

1.6.1.1. Emergency Procedures. All Boldface emergencies will be evaluated.

1.6.1.1.1. All Boldface will be evaluated by completion of a written Boldface sheet at the beginning of the EPE. This will complete the Boldface requisite for the evaluation. Any incorrectly completed Boldface will result in a "U" for the Boldface requisite. The EPE will not be started until successful completion of the Boldface requisite.

1.6.1.1.2. Aircrews may conduct simulated emergencies in flight while an evaluation is in progress. Simulated emergencies conducted in flight are graded in the flight phase and do not take the place of an EPE.

1.6.1.1.3. Aircraft Mission System / General Knowledge.

1.6.1.1.4. Cockpit/Crew Resource Management (CRM).

1.6.1.1.5. Unusual Attitude Recoveries. Pilots only.

1.6.2. All INSTM/QUAL EPEs will include the following additional items:

1.6.2.1. AFMAN 11-217, *Instrument Flight Procedures*.

1.6.3. All Mission (MSN) EPEs will include the following items (tailor MSN evaluation scenarios to unit tasking/mission).

1.6.3.1. Weapons system operation.

1.6.3.2. Electronic Attack (EA)/Self Protection Systems

1.6.3.3. Evasive action/Threat Reaction.

1.6.3.4. Weapons employment.

1.6.4. Examinees receiving an overall unqualified grade will be placed in supervised status until recommended additional training is completed and/or a reevaluation is successfully accomplished. Examinees receiving an overall unqualified grade because of an unsatisfactory Boldface accomplishment will not be permitted to fly until a successful reevaluation is accomplished. For EPEs in which the examinee is qualified, but requires additional training, the FE will indicate whether the additional training will be accomplished before the next flight. Additional training and reevaluations will be accomplished IAW AFI 11-202V2.

1.6.5. A single EPE may be administered to fulfill the requisites for the combined MSN/INSTM/QUAL evaluation. The combined EPE must be of sufficient scope and length to ensure all required areas for each evaluation are accomplished.

1.6.6. The following grading criteria will be used to grade individual items on EPEs:

1.6.6.1. **Q.** Performance is correct. Quickly recognizes and corrects errors.

1.6.6.2. **Q-.** Performance is safe, but indicates limited proficiency. Makes errors of omission or commission.

1.6.6.3. **U.** Performance is unsafe or indicates lack of knowledge or ability.

1.7. Additional Training.

1.7.1. Examiners are responsible for assigning and documenting additional training requirements. Any approved training device or medium may be used for additional training.

1.7.2. Required additional training will not be accomplished on the same flight as the evaluation. EXCEPTION: Required additional training on the same flight as the evaluation is allowed when unique situations present valuable training opportunities (i.e., thunderstorm avoidance, crosswind landings, etc.). This option requires examiner discretion and judicious application. When used, the examinee must be informed when additional training begins and ends.

1.8. Unsatisfactory Performance:

1.8.1. Rechecks may be accomplished on the ground or in flight, at the discretion of the examiner. Rechecks will normally be administered by an examiner other than the one who administered the original evaluation.

1.8.2. If the examiner observes another aircrew member jeopardizing safe flight, the examiner (if qualified in the position) will assume the duties of that aircrew member. This does not mean the examiner must assume the examinee's position any time unsatisfactory performance is observed. If the examiner feels the examinee can continue safely with supervision, the examiner is not required to assume the examinee's duties.

1.9. Examinations.

1.9.1. Open book examinations. Derive the questions from flight manuals and governing AFIs and command directives. An open book examination is a requisite for the QUAL and MSN evaluations. The open book QUAL exam will consist of a minimum of 50 questions; the open book MSN exam will consist of a minimum of 25 questions, at least 25% derived from tactical doctrine documents related to EC-130H combat operations (AIR FORCE TACTICS, TECHNIQUES and PROCEDURES (AFTTP)).

1.9.2. Closed book examinations are general knowledge 50 question written tests. Test questions are derived from the applicable crew position Master Question File (MQF).

1.9.3. Pilots and navigators will take an instrument examination. In order to take the exam, crewmembers must be current in the ground training event, Instrument Refresher Course (IRC). The IRC is a ground training item and will be accomplished IAW AFMAN 11-210 *Instrument Refresher Program*.

Chapter 2

EVALUATION REQUIREMENTS

2.1. General.

2.1.1. All evaluations will follow the guidelines set in AFI 11-202V2.

2.1.2. Required areas for flight evaluations are shown in **Table 2.1** through **Table 2.7** and for EPEs in **Para 1.6.1** When it is impractical or not possible to accomplish a required flight evaluation area in-flight, it may be evaluated by an alternate method in order to complete the evaluation. Document the reason and type of alternate method used in the Comments portion of the AF Form 8. If the FE determines the required item cannot be adequately evaluated by an alternate method, the examinee will require an additional flight to complete the evaluation.

2.1.2.1. Areas annotated with an "R" are required items for that evaluation.

2.1.3. **Publications Check.** Publications checks will be accomplished as specified in the unit supplement to AFI 11-202V2.

2.1.4. **Cockpit/Crew Resource Management (CRM).** In accordance with AFI 11-290, *Cockpit/Crew Resource Management,* CRM skills will be evaluated during all evaluations. CRM skills are integral to all phases of flight and are embedded within specific grading criteria. Therefore, no specific evaluation criteria area titled CRM exists. As all the CRM skills listed on the AF IMT 4031 *CRM Skills Criteria* are included/embedded, use of the IMT 4031 is unnecessary for evaluations in the EC-130H. The Stan/Eval trend program can be used to measure the effectiveness of CRM training.

2.2. Requirements. This volume requires completion only of those evaluations specified in this chapter or a combination thereof. Special qualifications (i.e., Functional Check Flight) do not require initial or recurring evaluations; annotate these qualifications on the letter of certification.

2.2.1. Mission evaluations should be as realistic as possible with a minimum of simulated events. Do not deviate from peacetime restrictions.

2.2.1.1. Pilot Instrument/Qualification evaluations should include approaches to airfields other than home station or deployed locations when possible.

2.3. Formal Course Evaluations.

2.3.1. Fly syllabus evaluations IAW syllabus mission profile guidelines if stated, or on a mission profile developed from syllabus training objectives. Formal course guidelines may be modified, based on local operating considerations or examiner judgment, to complete the evaluation.

2.4. Instructor Evaluations.

2.4.1. Conduct instructor evaluations IAW AFI 11-202V2, as supplemented, and **Chapter 3** of this volume. Thoroughly evaluate the examinee's instructor knowledge and ability.

2.4.2. Initial Instructor. The emphasis of initial instructor evaluations is instructor duties. These evaluations should be scheduled with a crewmember requiring training (PFT, or unqualified). Crewmembers may use their initial instructor evaluation to satisfy requirements

of a periodic evaluation, provided all evaluation requirements for the periodic evaluation are accomplished by the examinee (not only instructed). Mission Crew Initial Instructor evaluations may be conducted in the COMPASS CALL Mission Crew Simulator (CCMCS).

2.4.3. Requalification (RQ) Instructor. The emphasis of all RQ instructor evaluations is instructor duties. These evaluations may be scheduled with a crewmember requiring training (PFT, or unqualified). Crewmembers may use their requalification instructor evaluation to satisfy requirements of a periodic evaluation, provided all evaluation requirements for the periodic evaluation are accomplished by the examinee (not only instructed).

2.4.4. Recurring Instructor Evaluations. Instructor duties will be evaluated on recurring periodic evaluations for crewmembers having completed an INIT INSTR evaluation. The emphasis of recurring instructor evaluations is accomplishment of all required items for the basic duties of the crew position. The examinee is required to demonstrate instructional ability in a graded area. Examiners will brief specific area(s) in which examinees will demonstrate instructional ability, and document these on the back of the AF Form 8. Recurring instructor evaluations may be scheduled with a student provided the instructor is evaluated (performing not instructing) all required items and the student is able to complete their syllabus event in its entirety.

2.5. Evaluation Requirements Tables. **Table 2.1** through **Table 2.7** depict grading areas for specific crew position evaluations. Unless otherwise noted, all areas apply to EC-130H COMPASS CALL (all blocks).

Table 2.1. General Grading Areas (All Crew Positions, All Initial/Periodic Evaluations).

	Note	**Grading Areas**	
1		Safety - CRITICAL	R
2		Aircrew Discipline - CRITICAL	R
3		Airmanship/Situational Awareness - CRITICAL	R
4		Crew Coordination	R
5	1	Flight/Mission Planning	R
6		Knowledge of Directives	R
7		Preflight	R
8		Use of Checklist	R
9		Forms/Reports/Logs	R
10		Personal/Professional Equipment/Flight Publications	R
11	2	Emergency Equipment/Procedures	R
12	3	Briefings/Debriefings	R
13	4	Communications/Operations Security	R

14-20		Reserved for future use	

Notes:

1. Pilot, Navigator and Engineer only.
2. Grade if observed. Not required if evaluated as part of the EPE.
3. Required for all crew positions responsible for presenting briefings/debriefings.
4. Required for mission evaluations only.

Table 2.2. Instructor Evaluation Grading Areas (All Crew Positions).

	Notes	Grading Areas	
21		Mission Preparation	R
22		Instructional Ability	R
23		Instructor Knowledge	R
24		Briefings/Debriefings/Critique	R
25		Demonstration of Maneuvers/Procedures	R
26-30		Reserved for future use	

Table 2.3. Pilot Grading Area.

	Notes	Grading Areas	INSTM/QUAL	MSN
31		Pre-Takeoff	R	R
32		Takeoff	R	R
33		Departure	R	R
34		En route Navigation	R	R
35		Comm/IFF/SIF	R	R
36		Descent	R	
37	2, 3	Air-to-Air Refueling/Receiver	R	R
38		Defensive Systems/Tactics		R
39		Threat Avoidance		R
40		Holding/Procedure Turn	R	
41		Arrival Procedures (Instrument Flight Rules)	R	
42		Non-Precision Approach	R	

43		Circling/Side-Step Approach	R	
44	1	Precision Approach	R	
45		VFR Procedures/Patterns	R	
46		Not used		
47		Engine-Out Approach	R	
48		100/50 Percent Flap Landing	R	R
49		No Flap Landing	R	
50		Engine-Out Landing	R	
51		Touch-and-Go Landing	R	
52		Missed Approach/Go-Around	R	
53		Engine-Out Go-Around	R	
54		After Landing/Engine Shutdown	R	
55		Reverse Taxi		
56 - 70		Reserved for future use		

Notes:

1. Both a Precision Radar Approach (PAR) and an Instrument Landing System (ILS) are required if equipment and facilities are available and traffic flow permits. If a PAR or ILS approach is not available, the flight evaluation may be complete with one precision approach flown. Do not verbally evaluate the approach that wasn't flown.

2. Air-to-Air Refueling (AAR) will be evaluated on mission evaluations for all pilots maintaining an air-to-air refueling qualification. If air-to-air refueling is not evaluated, document as a restriction on the AF Form 8 as a restriction IAW AFI 11-202V2. Failure to evaluate air-to-air refueling does not otherwise affect aircraft qualification. See para **4.3.3**. for exceptions. Requalification in air-to-air refueling will be documented as an RQ evaluation.

3. Air-to-Air Refueling (AAR) will be evaluated on INSTM/QUAL evaluations only if: 1. Pilot has not been given an INIT MSN evaluation by the time he/she enters phase for a periodic INSTM/QUAL evaluation; and 2. Pilot has been given appropriate AAR training.

Table 2.4. Navigator Grading Areas.

	Notes	**Grading Areas**	**QUAL**	**MSN**
71		Flight Plan/Charts	R	R
72		Fuel Planning	R	R

73		Departure	R	R
74		Navigation Procedures		R
75		Radio Navigation	R	
76		Radar Navigation	R	
77		Navigation Systems	R	
78		Deviation Check	R	
79	1	True Airspeed (TAS) Check	R	
80		Course and Estimated Time of Arrival (ETA) Tolerance	R	
81		Fuel Management	R	
82		Defensive Systems/Tactics		R
83		Threat Analysis/Avoidance		R
84		Orbit Procedures		R
85	2	Air Refueling Procedures	R	R
86		Descent/Approach/Landing	R	R
87		Comm Procedures	R	R
88 - 110		Reserved for future use.		

Notes:

1. Not required during altitude changes related to air-to-air refueling.

2. Air-to-Air Refueling will be evaluated on MSN evaluations for all navigators maintaining an air-to-air refueling qualification. If air-to-air refueling is not evaluated during the INIT MSN evaluation, document as a restriction on the AF Form 8 as a restriction IAW AFI 11-202V2. For exceptions see para **5.3.3**. Failure to evaluate air-to-air refueling does not otherwise affect aircraft qualification. Requalification in air-to-air refueling will be documented as an RQ evaluation.

Table 2.5. Flight Engineer Grading Areas.

	Notes	**Grading Areas**	**QUAL**	**MSN**
111		AFTO Form 781	R	R
112		Ground Support Equipment	R	R
113		Refuel/Defuel	R	R
114		TOLD	R	R
115		Cockpit	R	R

116		Before Starting Engines/Starting Engines	R	R
117		Before Taxi/Taxi	R	R
118		Before Takeoff/Lineup	R	R
119		After Takeoff	R	R
120		En route	R	R
121		Tactical/Mission Employment		R
122		Descent/Before Landing	R	R
123		After Landing	R	R
124		Engine Shutdown	R	R
125		Before Leaving Airplane	R	R
126		Postflight	R	R
127		Mission Procedures		R
128		Air Refueling Systems/Procedures	R	R
129		Weight and Balance	R	R
130		Defensive Systems/Tactics		R
131 - 140		Reserved for future use		

Note:

Air Refueling will be evaluated on MSN/QUAL and QUAL evaluations for all flight engineers maintaining an air-to-air refueling qualification. If air-to-air refueling is not evaluated during the INIT MSN/QUAL evaluation, document as a restriction on the AF Form 8 as a restriction IAW AFI 11-202V2. For exceptions see para **6.3.4**. Failure to evaluate air-to-air refueling does not otherwise affect aircraft qualification. Requalification in air-to-air refueling will be documented as an RQ evaluation.

Table 2.6. Airborne Maintenance Technician (AMT) Grading Areas.

	Notes	**Grading Area**	**MSN/QUAL**
141		Pre-Takeoff	R
142		After Takeoff/ System Startup	R
143		Level Off/Cruise/En route	R
144		Aircraft Systems	R
145		Air Refueling	R
146		Communications	R

147		Trouble Analysis/Corrective Action	R
148		System Shutdown/Descent	R
149		Before Landing	R
150		After Landing/Engine Shutdown	R
151		Mission Termination	R
152		Raids/BP1/BP2/BP3	R
153		RFR	R
154		Acquisition Subsystem	R
155		SCM	R
156		Analysis Subsystem	R
157		Exciter Subsystem	R
158		RFT	R
159		DF Subsystem	R
160		SPEAR Subsystem	R
161		High Band Systems	R
162		External Communications	R
163		Tech Station Subsystem	R
164		Human-Machine Interface	R
165		DPS	R
166		SS1/SS2	R
167		AXE	R
168		Reverse taxi	
169 - 190		Reserved for future use	

Table 2.7. COMPASS CALL Mission Crew Grading Areas.

	Notes	**Grading Areas**	**A**	**B**	**C**	**D**	**E**
231		Mission Crew Planning	R	R	R	R	R
232		Communications Equipment	R	R	R		
233		System Setup	R	R	R	R	R
234		Mission Equipment System Knowledge/Operation	R	R	R	R	R
235		Tactical Employment	R	R			

236		Target/Threat Knowledge	R	R	R	R	R
237		Jamming Ops/Antenna Orientation/Timing	R	R			
238		Allocation/Use of Jamming/Radiate Resources	R	R			
239		Tactical Situation Monitoring	R	R	R		
240		Signal Environment Analysis			R	R	R
241		Mission Crew Supervision	R	R	R		
242		Communication	R	R	R		
243		Post Engagement	R	R	R	R	R
244		Mission Equipment System Malfunction Analysis	R	R	R	R	R
245		Post Flight	R	R	R	R	R
246		Mission Crew Debriefing	R				

Applicability:

A. Senior Mission Crew Commander

B. Mission Crew Commander

C. Mission Crew Supervisor

D. Acquisition Operator

E. Analysis Operator

Chapter 3

ALL EVALUATIONS

3.1. General. The grading criteria contained in this chapter apply to all crew positions and all evaluations.

3.2. Objective. The examinee must satisfactorily demonstrate the ability to perform required duties safely and effectively, including the operation of appropriate aircraft systems, in accordance with applicable technical orders, instructions, and directives.

3.3. Requirements. Evaluate all crewmembers on areas listed in **Table 2.1**, and instructors on areas listed in **Table 2.2**

3.4. General Grading Criteria:

3.4.1. **Area 1. Safety - (CRITICAL):**

3.4.1.1. Q. Aware of and complied with all safety factors required for safe aircraft operation and mission accomplishment.

3.4.1.2. U. Not aware of or did not comply with all safety factors required for safe aircraft operation or mission accomplishment. Operated the aircraft in a dangerous manner that could or did result in aircraft damage.

3.4.2. **Area 2. Aircrew Discipline - (CRITICAL):**

3.4.2.1. Q. Exhibited strict flight and crew discipline. Prepared and completed mission in compliance with existing instructions and directives.

3.4.2.2. U. Failed to exhibit strict flight and crew discipline. Failed to comply with existing instructions and directives which could have jeopardized safety or mission success.

3.4.3. **Area 3. Airmanship/Situational Awareness - (CRITICAL):**

3.4.3.1. Q. Executed the assigned mission in a timely, efficient manner. Anticipated situations which would have adversely affected the mission, and corrected them. Made appropriate decisions based on available information. Recognized a loss in situational awareness in self or others, and took appropriate action to regain awareness.

3.4.3.2. U. Decisions or lack thereof resulted in failure to accomplish the assigned mission. Demonstrated poor judgment to the extent that the mission or safety was compromised. Failed to recognize a loss of situational awareness in self or others.

3.4.4. **Area 4. Crew Coordination.**

3.4.4.1. Q. Effectively coordinated with other crewmembers during all phases of the mission. Crewmember identified, planned, and executed alternative mission activity in response to in-flight contingencies in a timely manner. Communicated in a clear and effective manner. Asked for or gave constructive feedback as necessary. Actively sought other crewmember opinions and ideas. Recognized and requested assistance when task-saturated. Crewmember properly prioritized multiple tasks and effectively used available resources, ensuring smooth mission execution.

3.4.4.2. Q-. Crew coordination was the minimum acceptable. Coordination was lacking with other crewmembers to the extent minor deviations or omissions caused delays, confusion, and/or crew situational awareness. Unclear communication led to repetition or misunderstanding. Slow to ask for or give constructive feedback. Crewmember was slow to identify, plan, or execute alternative mission activities in response to contingencies, which resulted in limited mission success. Poor task prioritization and inefficient use of available resources resulted in less than optimum mission execution. Slow to recognize and request assistance when task-saturated.

3.4.4.3. U. Severe breakdown in coordination with other crewmembers precluded mission accomplishment and/or jeopardized safety. Crew coordination was lacking to the extent that mission accomplishment was severely degraded. Failed to participate in crew decisions or withheld information which would have corrected an unsafe situation. Failed to communicate effectively. Continuous interruptions and/or conduct/attitude was detrimental to communication among crewmembers. Withheld information and failed to ask for/respond to constructive criticism. Failed to prioritize multiple tasks and did not use available resources at his/her disposal to manage workload.

3.4.5. **Area 5. Flight/Mission Planning:**

3.4.5.1. Q. Developed a plan considering mission objectives and aircraft/ crew capabilities. Complied with procedures prescribed by the flight manual and other applicable directives. When required, extracted necessary information from air tasking order/frag. Complied with Go/No Go procedures and was prepared at briefing time. Planning was adequate with no more than minor omissions, deviations or errors which did not impact planned sortie success.

3.4.5.2. Q-. Minor errors or omissions detracted from mission effectiveness, but did not affect mission accomplishment. Limited knowledge of performance capabilities or approved operating procedures/rules.

3.4.5.3. U. Major errors or omissions would have prevented a safe or effective mission. Unsatisfactory knowledge of operating data or procedures. Did not comply with Go/No Go procedures. Not prepared at briefing time.

3.4.6. **Area 6. Knowledge of Directives:**

3.4.6.1. Q. Possessed an adequate knowledge of all applicable publications, directives, operating procedures and restrictions and where to find them in the correct publications. Understood how to apply the information correctly.

3.4.6.2. Q-. Possessed a limited knowledge of applicable publications, directives, operating procedures and restrictions, which caused minor deviations to established procedures. Unsure of some directives and/or had difficulty locating some information in appropriate publications.

3.4.6.3. U. Unaware of established procedures and/or could not locate them in the appropriate publication in a timely manner. Failed to comply with a procedure that could have jeopardized safety or mission success.

3.4.7. **Area 7. Preflight:**

3.4.7.1. Q. Completed all systems preflight/inspections IAW technical orders, checklists, and instructions. Individual technique complied with established procedures.

3.4.7.2. Q-. Minor deviations from established systems pre-flight/inspection. Individual technique was safe, but deviated from established procedures.

3.4.7.3. U. Failed to preflight critical component or could not conduct a satisfactory preflight/ inspection. Individual technique was unsafe and/or caused major deviations from established procedures.

3.4.8. **Area 8. Use of Checklist:**

3.4.8.1. Q. Consistently used and called for the correct checklist and gave the correct response at the appropriate time throughout the mission.

3.4.8.2. Q-. Checklist responses were untimely and/or crewmember required continual prompting for correct responses.

3.4.8.3. U. Used or called for incorrect checklist or consistently omitted checklist items. Unable to identify the correct checklist to use for a given situation. Omitted or did not complete checklist(s) at the appropriate time.

3.4.9. **Area 9. Forms/Reports/Logs:**

3.4.9.1. Q. All required forms and/or flight plans were complete, accurate, legible, accomplished on time and IAW applicable directives. Provided an accurate debrief of significant events to applicable agencies (Intel, Weather, Maintenance, etc.). Complied with security procedures.

3.4.9.2. Q-. Minor errors on forms and/or flight plans did not affect conduct of the flight/mission. Incorrectly or incompletely reported some information due to minor errors, omissions, and/or deviations. Complied with security procedures.

3.4.9.3. U. Did not accomplish required forms and/or flight plans. Omitted or incorrectly reported significant information due to major errors, omissions, and/or deviations. Failed to comply with security procedures.

3.4.10. **Area 10. Personal/Professional Equipment/Flight Publications:**

3.4.10.1. Q. Had all required personal and professional equipment. Displayed thorough knowledge of care and use of equipment and contents of required publications. Required equipment inspections were current. Publications were current and properly posted.

3.4.10.2. Q-. Did not have all required personal/professional equipment, but had all equipment essential to the mission; or had limited knowledge of use or content of required publications. Publications were posted with omissions, deviations, or errors, but did not jeopardize mission success or safety.

3.4.10.3. U. Did not have required personal/professional equipment essential for the mission. Unsatisfactory knowledge of care and use of equipment or content of required publications. Required equipment inspections were overdue or equipment was unserviceable. Publications were posted with major omissions, deviations, or errors which would have jeopardized mission success and/or safety.

3.4.11. **Area 11. Emergency Equipment/Procedures.**

3.4.11.1. Q. Satisfactory systems/procedural knowledge. Displayed thorough knowledge of location and use of emergency equipment. Operated within prescribed limits and correctly diagnosed problems. Performed/explained proper corrective action for each type of malfunction. Effectively used available aids.

3.4.11.2. Q-. Marginal systems/procedural knowledge. Limited knowledge of location and use of emergency equipment. Operated within prescribed limits but was slow to analyze problems or apply proper corrective actions. Did not effectively use or deviated in use of checklist and/or available aids.

3.4.11.3. U. Unsatisfactory systems/procedural knowledge. Displayed unsatisfactory knowledge of emergency equipment. Exceeded flight manual limitations. Unable or failed to analyze problem or take proper corrective action. Did not use checklist and/or available aids.

3.4.12. **Area 12. Briefings/Debriefings:**

3.4.12.1. Q. Contributed to the briefing content to ensure it included all applicable information. Briefings effectively organized and professionally presented in a logical sequence. Covered all pertinent items. Established objectives for the mission. Presented all training events and special interest items. Effectively used available briefing aids. Concluded briefing to allow crew transport on time. Debrief recapped key points, provided constructive feedback in a non-threatening manner, and provided appropriate corrective actions

3.4.12.2. Q-. Allowed omission of items pertinent but not critical to the mission. Events out of sequence, hard to follow, some unnecessary repetition. Some difficulty communicating clearly. Did not make effective use of available briefing aids. Limited discussion of training events or special interest items. Dwelled on non-essential items. Not fully prepared for briefing. Debrief covered key points, but lacked detail, constructive feedback, and/or corrective actions.

3.4.12.3. U. Failed to conduct required briefings. Failed to use briefing aids. Omitted essential items or did not correct erroneous information that could affect mission accomplishment. Demonstrated lack of knowledge of subject. Briefing poorly organized and not presented in a logical sequence; redundant throughout. Presented erroneous information that would affect safe/effective mission accomplishment. Presentation created doubts or confusion. Failed to discuss training events or special interest items. Late crew transport due to excessively long briefing. Debrief rushed, feedback provided was vague, threatening, and/or incomplete. Placed blame and/or provided inappropriate corrective actions.

3.4.13. **Area 13. Communications/Operations Security (Required for mission evaluations only):**

3.4.13.1. Q. Demonstrated thorough knowledge of communications/operations security procedures and courier procedures (if applicable). Had positive control of classified documents and information used throughout the mission. Properly stored, handled, and/or destroyed all classified equipment or information generated during the mission. Practiced sound COMSEC/OPSEC during all phases of the mission.

3.4.13.2. Q-. Limited knowledge of Communications Security (COMSEC)/Operations Security (OPSEC) procedures and/or courier procedures (if applicable). Limited knowledge of proper storage, handling, and destruction procedures would not have resulted in compromise of classified material, and did not impact mission accomplishment.

3.4.13.3. U. Unsatisfactory knowledge of COMSEC/OPSEC. Classified documents or information would have been compromised as a result of improper control by examinee. Unfamiliarity with COMSEC/OPSEC procedures had or could have had a negative impact on mission accomplishment.

3.4.14. **Area 14 - 20. Reserved for future use.**

3.5. Instructor Grading Criteria:

3.5.1. **Area 21. Mission Preparation:**

3.5.1.1. Q. Thoroughly reviewed student's training folder. Ascertained student's present level of training. Assisted student in pre-mission planning and allowed student time for questions. Correctly prioritized training events. Gave student a clear idea of mission training objectives.

3.5.1.2. Q-. Did not thoroughly review student's training folder. Caused student to hurry pre-mission planning. Poorly prioritized training events. Training plan/scenario made poor use of time.

3.5.1.3. U. Did not review student's training folder. Did not ascertain student's present level of training. Did not assist student with pre-mission planning or did not allow time for questions. Did not prioritize training events. Failed to give student a clear idea of mission training objectives, methods, and sequence of events.

3.5.2. **Area 22. Instructional Ability:**

3.5.2.1. Q. Demonstrated ability to communicate effectively. Provided appropriate guidance when necessary. Planned ahead, and instruction was accurate, effective, and timely. Identified and corrected potentially unsafe maneuvers/situations. Correctly analyzed student errors.

3.5.2.2. Q-. Minor discrepancies in the above criteria that did not adversely impact student progress.

3.5.2.3. U. Unable to effectively communicate or provide timely feedback to the student. Unable to perform, teach, or assess techniques, procedures, systems use, or tactics. Did not provide corrective action when necessary. Did not plan ahead or anticipate student problems. Did not identify unsafe maneuvers/situations in a timely manner.

3.5.3. **Area 23. Instructor Knowledge:**

3.5.3.1. Q. Demonstrated a high level of knowledge of all applicable aircraft systems, techniques, procedures, missions, and tactics to be performed. Possessed a high level of knowledge of all applicable publications and procedures, and understood how to apply both to enhance mission accomplishment. Completed appropriate training records accurately. Comments were clear and pertinent.

3.5.3.2. Q-. Minor errors/deficiencies in knowledge of above areas that did not affect safety or adversely affect student progress. Minor errors or omissions in training records. Comments were incomplete or slightly unclear.

3.5.3.3. U. Lack of knowledge of publications or procedures seriously detracted from instructor effectiveness. Could not apply knowledge of above areas. Did not complete required forms or records. Comments were invalid, unclear, or did not accurately document performance.

3.5.4. **Area 24. Briefings/Debriefings/Critique:**

3.5.4.1. Q. Briefings were well organized, accurate, and thorough. Reviewed student's present level of training and defined mission events to be performed. Showed an excellent ability during the critique to reconstruct the flight, offer mission analysis, and provide guidance where appropriate. Training grade reflected the actual performance of the student relative to the standard. Pre-briefed the student's next mission, if required.

3.5.4.2. Q-. Minor errors or omissions in briefings and/or critique did not affect safety or adversely affect student progress.

3.5.4.3. U. Briefings were marginal or non-existent; major errors or omissions in briefings/ debriefings. Did not review student past performance. Analysis of events or maneuvers was incomplete, inaccurate, or confusing. Training grade did not reflect actual performance of student. Overlooked or omitted major discrepancies. Incomplete pre-briefing of student's next mission, if required.

3.5.5. **Area 25. Demonstration of Maneuvers/Procedures:**

3.5.5.1. Q. Effectively demonstrated procedures and techniques. Provided concise, meaningful, and timely in flight commentary.

3.5.5.2. Q-. Performed required maneuvers/procedures with minor deviations from prescribed parameters. In flight commentary was sometimes unclear or poorly timed, interfering with student performance. Discrepancies in the above areas did not adversely affect safety or student progress.

3.5.5.3. U. Was unable to properly perform required maneuvers/procedures. Made major procedural errors. Did not provide in flight commentary and/or in flight commentary was incorrect or unsafe.

3.5.6. **Areas 26 - 30. Reserved for future use.**

Chapter 4

PILOT EVALUATIONS

4.1. General.

4.1.1. The criteria contained here and in **Chapter 3** apply to all pilot flight evaluations. The following general criteria apply during all phases of flight except as noted for specific events and instrument final approaches.

Table 4.1. General Criteria.

Q	Altitude	+/- 200 feet
	Airspeed	+/- 5 knots (but not less than Vmca)
	Course	+/- 5 degrees/3 NM (whichever is greater)
	TACAN Arc	+/- 2 NM
Q-	Altitude	+/- 300 feet
	Airspeed	+/- 10 knots (but not less than Vmca)
	Course	+/- 10 degrees/5 NM (whichever is greater)
	TACAN Arc	+/- 3 NM
U		Exceeded Q- limits

4.1.2. The baseline qualification for EC-130H Mobility Pilot Development (MPD Pilots is as described below:

4.1.2.1. Pilots trained under the MPD syllabus are qualified to perform INSTM/QUAL pilot duties in the left and right seat.

4.1.2.2. Pilots trained under the MPD syllabus are qualified to perform MSN duties in the right seat only.

4.1.2.3. MPD graduates do not require a separate INIT INSTM/QUAL evaluation when transitioning to Aircraft Commander. The skill set is identical for both positions. If an INSTM/QUAL evaluation is administered in conjunction with the INIT MSN evaluation leading to Aircraft Commander Certification document the INSTM/QUAL and INIT MSN on separate blocks in the flight phase section of the AF Form 8 and designate crew position as MP on the AF Form 8.

4.2. Objective. The examinee must satisfactorily demonstrate the ability to perform all pilot duties safely and effectively, including the operation of appropriate aircraft systems, IAW applicable technical orders, directives and published procedures.

4.3. Requirements: General. Pilot evaluations will be flown from the left seat. Pilot graduates of the Mobility Pilot Development program will be evaluated in the right seat for MSNs and in the left seat for INSTM/QUAL checks. Instructor pilot evaluations may be flown from either seat. The evaluator pilot may sit in either seat during evaluations. Two complete aircraft

commander evaluations will not be accomplished on the same sortie. **Note:** A single evaluator pilot may administer an aircraft commander and one or more pilot evaluation(s) on the same sortie.

4.3.1. Aircraft Commander.

4.3.1.1. Qualified aircraft commanders will be the Pilot-in-Command (PIC) while being evaluated. Unqualified pilots will not be designated PIC.

4.3.1.2. Pilots not qualified as aircraft commanders may be designated as the PIC for purposes of the aircraft commander upgrade evaluation. Unit commanders will sign these flight authorizations. In cases where the pilot is not designated as PIC, the evaluator pilot or another AC qualified pilot will be designated as the PIC. At no time will an unqualified pilot or a Previously Qualified Pilot (PQP) who has not completed training IAW AFI 11-2EC-130E/HV1 be designated as the PIC.

4.3.2. Instrument/Qualification. See **Table 2.3** for required evaluation areas. Instrument evaluations may not be conducted separately from qualification evaluations. Do not complete an instrument/qualification evaluation unless, as a minimum, the following are observed in flight: an instrument takeoff; one full low or high altitude instrument approach procedure (IAP); one precision approach; one non-precision approach; one landing. ***NOTE:*** One of the approaches must be simulated engine out (mobility pilot development program pilots and above).

4.3.2.1. For non-instructor qualified pilot evaluations without the availability of an instructor pilot, the evaluator pilot will occupy the right seat for simulated emergency approaches, landings and go-arounds. The evaluator pilot will perform all normal copilot duties and set the affected throttle for simulated three-engine operations.

4.3.2.2. Initial/Re-qualification Evaluations. C-130 basic initial/re-qualification, aircraft commander upgrade, and instructor upgrade are normally conducted at Little Rock AFB and update the eligibility for instrument/qualification evaluations, except as noted in paragraph **2.5** of this instruction.

4.3.3. Air-to-Air Refueling (AAR)/Receiver Qualification. Applies to all EC-130 pilots. Complete initial/requalification air-to-air refueling qualification IAW ACC-approved syllabi. Initial qualification should occur on the initial mission evaluation. If unable to complete the mission evaluation due to lack of clearance, a SPOT evaluation should be given to establish qualification in air-to-air refueling. The individual's training records and Unit Letter of Certifications will be updated to reflect the qualification. Following initial/requalification, evaluate this area on mission evaluations, to the max extent possible. As a last resort, SQ/CCs may authorize verbal evaluation of AAR for Mobility Pilot Development Graduates, provided it is not an initial AAR evaluation, or it was not verbally evaluated on the previous evaluation. Failure to evaluate air-to-air refueling does not otherwise affect aircraft qualification.

4.3.3.1. If initial AAR qualification was established on a previous SPOT evaluation for individuals identified in para 4.3.3., then the AAR portion of the Initial mission/qualification evaluation can be verbally evaluated.

4.3.4. Mission. See **Table 2.3** for required evaluation areas. All mission evaluations require a COMPASS CALL mission profile with at least two turns in the mission orbit. Do not simulate the mission crew. Instrument/qualification evaluations may be completed on the same sortie as mission evaluations if the flight profile allows completion of all required areas for both evaluations. Mission evaluations will be based on unit scenarios and mission crew training. Threats for takeoff, on-station, tactical repositioning, retrograde procedures and recovery will be based on training required by the COMPASS CALL mission crew. Defensive slides and orbit positioning maneuvering may be flown if prior airspace coordination has been accomplished. Combat descents will not be performed during mission evaluations. All defensive maneuvers may be verbally evaluated during the mission if appropriate to the scenario.

4.4. Grading Criteria. See **Table 2.3** for applicability to instrument/qualification or mission evaluations.

4.4.1. **Areas 1 through 20--use criteria in Chapter 3 of this volume.**

4.4.2. **Areas 21 through 30--use criteria in Chapter 3 of this volume (if applicable).**

4.4.3. **Area 31. Pre-Takeoff:**

4.4.3.1. Q. Established and adhered to station, start engine, taxi, and take-off times to assure thorough preflight, check of personal equipment, crew/passenger briefings, etc. Accurately determined readiness of aircraft for flight.

4.4.3.2. Q-. Same as above except for minor procedural deviations that did not detract from mission effectiveness.

4.4.3.3. U. Failed to accurately determine readiness of aircraft for flight. Major deviations in procedure which would preclude safe mission accomplishment. Crew errors directly contributed to a late takeoff that degraded the mission or made it ineffective.

4.4.4. **Area 32. Takeoff:**

4.4.4.1. Q. Maintained smooth, positive aircraft control throughout takeoff. Performed takeoff in accordance with flight and performance manual procedures.

4.4.4.2. Q-. Minor deviations from published procedures which did not affect safety of flight. Control was somewhat rough or erratic. Hesitant in application of procedures or corrections.

4.4.4.3. U. Takeoff was potentially dangerous. Exceeded aircraft/systems limitations. Failed to establish proper climb attitude. Excessive deviation from intended flight path. Violated flight and/ or performance manual procedures.

4.4.5. **Area 33. Departure:**

4.4.5.1. Q. Performed departure as published/directed and complied with all restrictions or controlling agency instructions. Made all required reports. Ensured navaids were properly tuned, identified, and monitored. Applied course/heading corrections promptly. Demonstrated smooth, positive aircraft control.

4.4.5.2. Q-. Minor deviations in navigation occurred during departure. Slow to comply with controlling agency instructions or unsure of reporting requirements. Some

deviations in tuning, identifying, and monitoring navaids were observed. Slow to apply course/heading corrections. Aircraft control was not consistently smooth and positive.

4.4.5.3. U. Failed to comply with published/directed departure, or controlling agency instructions. Accepted an inaccurate clearance. Aircraft control was erratic.

4.4.6. **Area 34. En Route Navigation:**

4.4.6.1. Q. Satisfactory capability to navigate using all available means. Used appropriate navigation procedures. Ensured navaids were properly tuned, identified, and monitored. Complied with clearance instructions. Aware of position at all times. Remained within the confines of assigned airspace. Fix to fix within 3 NM (if applicable).

4.4.6.2. Q-. Minor errors in procedures/use of navigation equipment. Some deviations in tuning, identifying, and monitoring navaids were observed. Slow to comply with clearance instructions. Had some difficulty in establishing exact position and course. Slow to adjust for deviations in time and course. Fix to fix within 5 NM (if applicable).

4.4.6.3. U. Major errors in procedures/use of navigation equipment. Did not ensure navaids were tuned, identified and monitored. Could not establish position. Failed to recognize checkpoints or adjust for deviations in time and course. Did not remain within the confines of assigned airspace. Exceeded Q- criteria.

4.4.7. **Area 35. Comm/IFF/SIF:**

4.4.7.1. Q. Complete knowledge of and compliance with correct Comm/IFF/SIF procedures. Transmissions were concise with proper terminology. Complied with and acknowledged all required instructions. Thoroughly familiar with all communications security requirements, and HAVE QUICK and secure voice equipment. Correctly authenticated communications as necessary.

4.4.7.2. Q-. Occasional deviations from procedures which required retransmissions or resetting codes. Slow in initiating and/or missed several required radio calls. Transmissions contained extraneous matter, were not in proper sequence, or used non-standard terminology. Displayed limited knowledge of communication security requirements, HAVE QUICK and secure voice equipment. Required numerous attempts to complete authentication communications as necessary.

4.4.7.3. U. Incorrect procedures or poor performance caused confusion and jeopardized mission accomplishment. Omitted numerous required radio calls. Displayed inadequate knowledge of communications security requirements, HAVE QUICK and secure voice equipment. Was unable to properly authenticate communications.

4.4.8. **Area 36. Descent:**

4.4.8.1. Q. Performed descent as directed. Complied with all restrictions. Properly set altimeters and tuned, identified, and monitored all navaids.

4.4.8.2. Q-. Performed descent as directed with minor deviations that did not compromise mission safety. Slow to comply with controller instructions or set proper altimeter setting. Delayed tuning, identifying, or monitoring proper navaids. Slow to make corrections.

4.4.8.3. U. Performed descent with major deviations. Failed to follow controller instructions. Failed to tune, identify, or monitor navaids or set altimeters properly. Erratic corrections were observed.

4.4.9. **Area 37. Air Refueling/Receiver.**

4.4.9.1. Q. Rendezvous effectively accomplished using proper procedures. Demonstrated effective and appropriate use of radio communications for briefed EMCON level. Expeditiously established and maintained proper position. Aircraft control was positive and smooth.

4.4.9.1.1. Aircraft commander: Maintained the contact position for 10 minutes (at least 5 minutes continuous) with no more than one pilot-induced disconnect (either pilot initiated, or causal due to erratic performance).

4.4.9.1.2. Mobility Pilot development graduates: Maintained the precontact position for at least two minutes.

4.4.9.2. Q-. Rendezvous delayed by improper techniques, procedures or radio communications. Slow to recognize and apply needed corrections to establish and maintain proper position. Aircraft control was not always positive and smooth, but adequate. Accomplished published/directed procedures with deviations or omissions that did not affect the successful completion of air-to-air refueling.

4.4.9.2.1. Aircraft commander: Maintained the contact position for at least 10 minutes (at least 5 minutes continuous) with no more than two pilot-induced disconnects (either pilot initiated, or causal due to erratic performance).

4.4.9.2.2. Mobility Pilot development graduates: Maintained the precontact position between 1 to 2 minutes.

4.4.9.3. U. Displayed lack of knowledge or familiarity with procedures to the extent that air-to-air refueling was or could have been jeopardized. Failed rendezvous as a result of improper procedures. Spent excessive time in trail. Aircraft control in the pre-contact/refueling position was erratic or unsafe. Made deviations or omissions that affected flight safety and/or the successful completion of the air-to-air refueling . Used unacceptable procedures.

4.4.9.3.1. Aircraft commander: Performance caused more than two pilot-induced disconnects (either pilot initiated, or causal due to erratic performance) and/or delayed mission accomplishment.

4.4.9.3.2. Mobility Pilot development graduates: Unable to safely maintain the precontact position.

4.4.10. **Area 38. Defensive Systems Tactics:**

4.4.10.1. Q. Demonstrated satisfactory knowledge of defensive systems and applied appropriate tactics. Made timely and appropriate inputs to crew during mission.

4.4.10.2. Q-. Limited knowledge of defensive systems and/or appropriate tactics. Minor errors in tactics selection/execution. Did not make timely inputs to crew during mission.

4.4.10.3. U. Knowledge of defensive systems was unsatisfactory. Unfamiliar with the appropriate tactic for a given scenario. Major errors in tactics selection would have resulted in an unsuccessful mission.

4.4.11. **Area 39. Threat Analysis/Avoidance:**

4.4.11.1. Q. Able to plot threats in-flight and formulate a plan of action to avoid lethal range of given threat system. Executed the proper evasive maneuver in a timely manner when given an immediate threat. Adequately analyzed and degraded all threats ensuring effective mission accomplishment. Was aware of appropriate tactics to avoid threats and exposure.

4.4.11.2. Q-. Made minor errors in plotting and avoiding the lethal range of a given threat system. Slow to execute the proper evasive maneuver. Minor errors in threat analysis or tactics selection.

4.4.11.3. U. Was unable to plot a given threat. Did not avoid lethal range of given threat system. Did not execute an effective evasive maneuver when given an immediate threat. Failed to ensure mission effectiveness by not adequately analyzing or degrading threat(s). Was not aware of appropriate tactics for specific threats or terrain.

4.4.12. **Area 40. Holding/Procedure Turn:**

4.4.12.1. Q. Performed entry and holding in accordance with published procedures and directives. Tuned, identified, and monitored proper navaids. Holding pattern limits exceeded by not more than:

4.4.12.1.1. VOR Leg timing +/- 15 seconds

4.4.12.1.2. TACAN +/- 2 NM

4.4.12.2. Q-. Performed entry and holding procedures with minor deviations. Delayed tuning, identifying, or monitoring proper navaids. Holding pattern limit exceeded by not more than:

4.4.12.2.1. VOR Leg timing +/- 20 seconds

4.4.12.2.2. TACAN +/- 3 NM

4.4.12.3. U. Holding was not in accordance with technical orders, directives, or published procedures. Failed to tune, identify, or monitor navaids. Exceeded Q- holding pattern limits.

4.4.13. **Area 41. Arrival Procedures (Instrument Flight Rules):**

4.4.13.1. **Subarea 41a. Instrument Approach Procedure/Penetration**

(Initial Approach Fix to Final Approach Fix/Descent Point):

NOTE: Use area 35 criteria and the criteria below for procedure turn approaches.

4.4.13.1.1. Q. Performed the approach procedure/penetration as published/directed and IAW applicable directives. Tuned, identified, and monitored proper navaids at the appropriate time. Complied with all restrictions. Made smooth and timely corrections.

4.4.13.1.2. Q-. Performed the approach procedure/penetration with minor deviations. Delayed tuning, identifying, and monitoring proper navaids. Complied with all restrictions. Slow to make corrections.

4.4.13.1.3. U. Performed the approach procedure/penetration with major deviations. Failed to tune, identify, and monitor navaids, resulting in major deviations and/or unsafe conditions. Erratic corrections. Failed to comply with restrictions.

4.4.13.2. **Subarea 41b. Instrument Pattern/Radar Vectors to Final:**

4.4.13.2.1. Q. Performed procedures IAW applicable directives. Smooth and timely response to controller instructions.

4.4.13.2.2. Q-. Performed procedures with minor deviations. Slow to respond to controller instructions.

4.4.13.2.3. U. Performed procedures with major deviations/erratic corrections. Failed to comply with controller instructions.

4.4.14. **Area 42. Non-Precision Approach:**

4.4.14.1. Q. Approach was IAW published procedures. Used appropriate descent rate to arrive at Minimum Decision Altitude (MDA) at or before Visual Descent Point (VDP). Position permitted a safe landing.

4.4.14.1.1. Airspeed +10/-5 knots

4.4.14.1.2. Heading +/-5 degrees Airport Surveillance Radar (ASR)

4.4.14.1.3. Course +/-5 degrees at MAP

4.4.14.1.4. Localizer Less than one dot deflection

4.4.14.1.5. MDA +100/-0 feet

4.4.14.2. Q-. Performed approach with minor deviations. Arrived at MDA at or before the MAP, but past the VDP. Initiated missed approach/go-around as directed or appropriate.

4.4.14.2.1. Airspeed +15/-5 knots

4.4.14.2.2. Heading +/-10 degrees (ASR)

4.4.14.2.3. Course +/-10 degrees at MAP

4.4.14.2.4. Localizer Within two dots deflection

4.4.14.2.5. MDA +150/-50 feet

4.4.14.3. U. Approach not IAW flight manual, directives or published procedures. Maintained steady-state flight below the MDA, even though the -50 foot limit was not exceeded. Could not land safely from approach and did not initiate missed approach/go-around when appropriate or directed. Exceeded Q- criteria.

4.4.15. **Area 43. Circling/Side-Step Approach:**

4.4.15.1. Q. Properly identified aircraft category for the approach and remained within the lateral limits for that category. Complied with controller's instructions. Attained

runway alignment without excessive bank angles. Did not descend from the MDA until in a position to place the aircraft on a normal glide path or execute a normal landing.

4.4.15.1.1. Airspeed +10/-5 knots

4.4.15.1.2. Altitude +100/-0 feet

4.4.15.2. Q-. Slow to comply with controller's instructions. Attained runway alignment but occasionally required excessive bank angles or maneuvering.

4.4.15.2.1. Airspeed +15/-5 knots

4.4.15.2.2. Altitude +150/-50 feet

4.4.15.3. U. Did not properly identify aircraft category or exceeded the lateral limits of circling airspace. Did not comply with controller's instructions. Excessive maneuvering to attain runway alignment was potentially unsafe. Descended from the MDA before the aircraft was in position for a normal glide path or landing. Exceeded Q- criteria.

4.4.16. **Area 44. Precision Approach:**

4.4.16.1. **Subarea 44a. Precision Approach Radar (PAR)**

4.4.16.1.1. Q. Approach was IAW published procedures. Smooth and timely response to azimuth and glide slope or controller's instructions. Complied with decision height. Position would have permitted a safe landing. Maintained glide path with only minor deviations.

4.4.16.1.1.1. Airspeed +10/-5 knots

4.4.16.1.1.2. Heading Within 5 degrees of controller instructions.

4.4.16.1.2. Q-. Performed approach with minor deviations. Slow to make corrections or react to controller's instructions. Position permitted a safe landing. Improper glide path control. Initiated missed approach as directed or at decision height +50/-0 feet, if applicable.

4.4.16.1.2.1. Airspeed +15/-5 knots

4.4.16.1.2.2. Heading Within 10 degrees of controller's instructions.

4.4.16.1.3. U. Approach not IAW flight manual, directives or published procedures. Erratic course and glide slope corrections. Did not make corrections or react to controller's instructions. Did not comply with decision height and/or position would not have permitted a safe landing. Exceeded Q- limits.

4.4.16.2. **Subarea 44b. Instrument Landing System (ILS) Approach:**

4.4.16.2.1. Q. Performed procedures as published and IAW applicable directives. Smooth and timely corrections to azimuth and glide slope. Complied with decision height and position permitted a safe landing.

4.4.16.2.1.1. Airspeed +10/-5 KIAS

4.4.16.2.1.2. Glide slope/azimuth within one dot

4.4.16.2.2. Q-. Performed procedures with minor deviations. Slow to make corrections or initiate procedures. Position would have permitted a safe landing. Initiated missed approach at decision height +50/-0 feet, if applicable.

4.4.16.2.2.1. Airspeed +15/-5 KIAS

4.4.16.2.2.2. Glide slope within one dot low/two dots high

4.4.16.2.2.3. Azimuth within two dots

4.4.16.2.3. U. Performed procedures with major deviations. Erratic course/glide slope corrections. Did not comply with decision height or position would not have permitted a safe landing. Exceeded Q- criteria.

4.4.17. **Area 45. VFR Procedures/Patterns:**

4.4.17.1. Q. Adhered to published restrictions/local guidance. Performed traffic pattern and turn to final/final approach IAW flight manual procedures. Aircraft control was smooth and positive. Did not over/under-shoot final approach. Constantly cleared area of intended flight.

4.4.17.1.1. Airspeed +10/-5 knots

4.4.17.1.2. Pattern Altitude +/- 100 feet

4.4.17.2. Q-. Minor deviations from published restrictions/local guidance. Performed traffic pattern and turn to final/final approach with minor deviations to procedures. Aircraft control was safe but not consistently smooth and positive. Over/under-shot final approach slightly but was able to intercept a normal glide path. Adequately cleared area of intended flight.

4.4.17.2.1. Airspeed +15/-5 knots

4.4.17.2.2. Pattern Altitude +/- 200 feet

4.4.17.3. U. Major/unsafe deviations from published restrictions/local guidance. Did not perform traffic pattern and turn to final/final approach IAW technical orders, directives or published procedures. Displayed erratic aircraft control. Over/under-shot final approach by a wide margin requiring a go-around or potentially unsafe maneuvering on final. Did not clear area of intended flight. Exceeded Q- criteria.

4.4.18. **Area 46. Not used**

4.4.19. **Area 47. Engine Out Approach--use approach criteria for the type of approach being flown and the following:**

4.4.19.1. Q. Performed all required procedures IAW the flight manual and associated directives. Applied smooth, positive, and coordinated control inputs. Rudder and aileron inputs were in the correct direction..

4.4.19.2. Q-. Errors were made that did not affect safety. Aircraft control was not consistently smooth and positive. Rudder and aileron inputs were in the correct direction with some over/under control.

4.4.19.3. U. Rudder and/or aileron inputs were incorrect. Failed to perform the maneuver IAW the flight manual and associated directives. Exceeded Q- criteria.

4.4.20. **Area 48. 100/50 Percent Flap Landing.**

4.4.21. **Area 49. No Flap Landing.**

4.4.22. **Area 50. Engine-Out Landing.**

4.4.23. **Areas 48 through 50** - use the following criteria:

NOTES

1: The following criteria is written to generally apply to all landings. Flight examiners must apply this criteria judiciously to allow for the unique characteristics of each type of landing. Where runway configuration, arresting cable placement, or flight manual limitations require an adjustment to the desired touchdown point, a simulated runway threshold will be identified and the grading criteria applied accordingly. For instrument approaches, the examinee should utilize a normal glide slope from either the decision height or from a point where visual acquisition of the runway environment is made.

2. Specific items to evaluate include threshold altitude / airspeed, runway alignment, flare, touchdown speed and landing in a crab.

Q Performed landings as published/directed IAW flight manual and met the following criteria:

Airspeed: +/- 5 KIAS

Touchdown Zone: 1000-2000 feet

Centerline: +/- 15 feet left or right

Performed Braking/Propeller Reversing commensurate with landing conditions and IAW published/directed IAW the Flight Manual.

Q- Performed landings with minor deviation to procedures as published/directed. Landed in a slight crab. Exceeded Q criteria but not the following:

Airspeed: +10/-5 KIAS

Touchdown Zone: Threshold – 3000feet

Centerline: +/- 25 feet left or right

Braking or propeller reversing action not applied smoothly, nor accomplished commensurate with landing conditions; safety not jeopardized.

U Landing not performed as published/directed. Exceeded Q- criteria.

Braking or propeller reversing accomplished in an unsafe manner.

4.4.24. **Area 51. Touch and Go Landing (touchdown through lift-off):**

4.4.24.1. Q. Performed procedures in a timely manner and IAW the flight manual and local directives. Smooth and positive control. Maintained runway centerline within 15 feet left or right throughout the touch and go.

4.4.24.2. Q-. Performed procedures with minor deviations. Aircraft control was safe but not consistently smooth and positive. Delayed accomplishment of required checklists. Consistently left or right of centerline but within 25 feet.

4.4.24.3. U. Major deviations to procedures. Displayed erratic/unsafe aircraft control. Excessively delayed and/or misapplied required checklists. Allowed aircraft to drift/remain more than 25 feet left or right of centerline.

4.4.25. **Area 52. Missed Approach/Go-around:**

4.4.25.1. Q. Executed missed approach IAW published procedures and restrictions. Initiated and performed go-around promptly. Complied with controller's instructions. Applied smooth control inputs. Attained and maintained a positive climb.

4.4.25.2. Q-. Executed missed approach with minor deviations to published procedures/directives. Was slow or hesitant to initiate go-around. Slow to respond to controller's instructions. Slightly over-controlled the aircraft.

4.4.25.3. U. Did not execute missed approach IAW technical orders, directives or published procedures. Did not comply with controller's instructions. Deviations or misapplication of procedures could have led to an unsafe condition. Exceeded Q- criteria.

4.4.26. **Area 53. Engine-out Go-Around--use area 47 criteria and the following:**

4.4.26.1. Q. Performed all required procedures IAW the flight manual and associated directives. Applied smooth, positive and coordinated control inputs. Rudder and aileron inputs were in the correct direction.

4.4.26.2. Q-. Errors were made which did not affect safety. Aircraft control was not consistently smooth and positive. Rudder and aileron inputs were in correct direction with some over/under control.

4.4.26.3. U. Rudder and/or aileron inputs were incorrect. Failed to perform the maneuver IAW the flight manual and associated directives. Exceeded Q- criteria.

4.4.27. **Area 54. After Landing/Engine Shutdown:**

4.4.27.1. Q. Appropriate after-landing/engine shutdown checks and aircraft taxi procedures accomplished IAW published procedures.

4.4.27.2. Q-. Minor deviations or omissions were made to published procedures.

4.4.27.3. U. Appropriate after-landing/engine shutdown checks or aircraft taxi procedures were not IAW technical orders, directives or published procedures. Major deviations or omissions occurred which could have jeopardized safety.

4.4.28. **Area 55 Reverse Taxi:**

4.4.28.1. Q. Complied with all directives concerning reverse taxi. Adequately briefed procedures and complied with AMT directions. Aircraft control/throttle technique was smooth and positive.

4.4.28.2. Q-. Minor deviations to reverse taxi procedures. Briefing hard to follow but no compromise of safety. Slow to respond to AMT directions. Some over/under control.

4.4.28.3. U. Major deviations to procedures/directives. Failed to brief procedures and/or briefing created doubts or confusion. Failed to respond to AMT directions. Aircraft control was unsafe or could have resulted in damage to the aircraft or property, or injury to personnel.

4.4.29. **Areas 55 - 70. Reserved for future use.**

Chapter 5

NAVIGATOR EVALUATIONS

5.1. General. The criteria contained here and in **Chapter 3** apply to all navigator flight evaluations.

5.2. Objective. The examinee must satisfactorily demonstrate the ability to perform all navigator duties safely and effectively, including the operation of appropriate aircraft systems, IAW applicable flight manuals, and directives.

5.3. Requirements: EC-130H Navigators should receive a combined MSN/QUAL evaluation when possible. For individuals unable to participate in MSN activities, administer a QUAL only.

5.3.1. Qualification. See **Table 2.4** for required evaluation areas.

5.3.1.1. Simulator Evaluations. Navigators with 3 or more years experience in EC-130H aircraft may accomplish recurring qualification evaluations in the simulator (OFT, WST, or SNS) with 55 ECG/CC approval; however, use simulators as a last resort to perform evaluations. Do not conduct consecutive qualification evaluations in the simulator. (EXCEPTION: Formal school NRQ [basic re-qualification] students will normally accomplish evaluations in the SNS).

5.3.2. Mission. See **Table 2.4** for required areas. Mission evaluations will be based on unit scenarios and mission crew training. Threats for takeoff, on-station, tactical repositioning, retrograde procedures and recovery will be based on training required by COMPASS CALL mission crew.

5.3.3. Air-to-Air Refueling.

5.3.3.1. Initial Air-to-Air Refueling Qualification. Complete initial/requalification air-to-air refueling qualification IAW ACC-approved syllabi. Initial qualification should occur on the initial mission evaluation. If unable to complete the mission evaluation due to lack of clearance, a SPOT evaluation should be given to establish qualification in air-to-air refueling. Following initial/requalification, evaluate this area on mission evaluations, to the max extent possible. As a last resort, SQ/CCs may authorize verbal evaluation, provided it is not an initial evaluation, or it was not verbally evaluated on the previous evaluation. Failure to evaluate air-to-air refueling does not otherwise affect aircraft qualification.

5.3.3.1.1. If initial AAR qualification was established on a previous SPOT evaluation for individuals identified in para **5.3.3.1**., then the AAR portion of the Initial mission/qualification evaluation can be verbally evaluated.

5.3.3.2. Recurring Air-to-Air Refueling Qualification. Navigators qualified in AAR will be scheduled for an air-to-air refueling profile. Following initial/requalification, evaluate this area on mission evaluations, to the max extent possible. As a last resort, if AAR cannot be evaluated in flight, SQ/CCs may authorize verbal evaluation, provided it is not an initial AAR evaluation, or it was not verbally evaluated on the previous evaluation. Failure to evaluate air-to-air refueling does not otherwise affect aircraft qualification.

5.4. Grading Criteria:

5.4.1. **Areas 1 through 20**--use criteria in **Chapter 3** of this volume.

5.4.2. **Areas 21 through 30**--use criteria in **Chapter 3** of this volume (if applicable).

5.4.3. **Area 71. Flight Plan/Charts:**

5.4.3.1. Q. Completed a flight plan in its entirety with time errors not exceeding 5 minutes of total time to destination, or satisfactorily reviewed a provided computer flight plan. Selected current navigation charts of a proper scale and type of the sortie profile. Charts were constructed IAW current directives. Plotting errors did not exceed 5 NM.

5.4.3.2. Q-. Minor errors or omissions that would not have adversely affected mission accomplishment. Time errors did not exceed 10 minutes. Plotting errors did not exceed 10 NM.

5.4.3.3. U. Flight plan was not completed. Failed to review computer flight plan. Navigator flight plan contained major errors/omissions. Selected an improper or obsolete chart. Exceeded Q- criteria.

5.4.4. **Area 72. Fuel Planning:**

5.4.4.1. Q. Demonstrated satisfactory knowledge of the type and use of data contained in fuel planning instructions. "En route fuel" computation errors did not exceed 3%. Correctly computed and performed fuel management procedures. Correctly computed an Equal Time Point (ETP), when required.

5.4.4.2. Q-. Displayed limited knowledge of fuel planning instructions. "En route fuel" computation errors did not exceed 5%. Fuel management procedures and/or ETP computed with minor mathematical errors or omissions that would not adversely affect mission accomplishment.

5.4.4.3. U. Displayed inadequate knowledge of fuel planning instructions. Fuel computations and/ or ETP were not completed or contained major errors or omissions. Exceeded Q- criteria.

5.4.5. **Area 73. Departure:**

5.4.5.1. Q. Monitored headings, airspeeds, altitudes and aircraft position throughout departure. Used a SID/departure procedure and/or appropriate scale departure area chart. Provided headings, ETAs, and other required information in a timely manner. Monitored appropriate radios and clearances to ensure crew compliance. Provided updated information when the clearance caused a change in the planned departure. Ensured terrain clearance during departure by use of all available aids and the area chart.

5.4.5.2. Q-. Monitored aircraft position, but slow to provide headings, ETAs, or other required information. Performance did not degrade mission accomplishment or compromise flight safety.

5.4.5.3. U. Did not monitor departure headings, airspeeds or altitudes. Unaware of aircraft position and unable to provide updated information when required. Did not use a SID and/or an appropriate scale departure area chart. Allowed major deviations that degraded mission accomplishment or compromised safety. Did not ensure terrain clearance during the departure. No area chart available.

5.4.6. **Area 74. Navigation Procedures:**

5.4.6.1. Q. Certain of exact aircraft position. Remained within 3 NM of course centerline unless maneuvering for cause. ETAs/ RETAs were within 2 minutes of actual times of arrival (ATAs). Thorough knowledge of en route time status in relation to objective area. Complied with all altitude and airspace restrictions. Avoided inclement weather in accordance with current guidance.

5.4.6.2. Q-. Uncertain of exact aircraft position due to marginal navigational procedures. Flew 3 to 5 NM from course centerline without maneuvering for cause. ETAs/revised estimated time of arrivals (RETA) were within 3 minutes of ATAs. Better awareness of required timing events or en route time status could have avoided excessive, unplanned maneuvering.

5.4.6.3. U. Exceeded Q- criteria and/or evaluator had to alter aircraft heading to remain within course tolerance, observe airspace restrictions, or correctly deviate around weather. Unable to maintain position awareness throughout most of the route. Unable to accurately assess required timing or unaware of mission time status, jeopardizing mission accomplishment. Poor airspeed control resulted in numerous or extreme airspeed adjustments. Violated altitude or airspace restrictions.

5.4.7. **Area 75. Radio Navigation:**

5.4.7.1. Q. Accurately tuned, identified, and interpreted readings of TACANs, VORs or NDBs. Consistently selected stations that afforded the best LOPs. Position accuracy within 4 NM.

5.4.7.2. Q-. Better use of radio aids could have enhanced navigation. Displayed weakness in fixing or plotting procedures. Position accuracy did not exceed 8 NM.

5.4.7.3. U. Unable to accurately tune and identify radio aids. Did not understand VOR/TACAN/ NDB bearing procedures or was unable to obtain position by means of radio aids. Position error greater than 8 NM.

5.4.8. **Area 76. Radar Navigation:**

5.4.8.1. Q. Demonstrated thorough knowledge and understanding of radar equipment. Used correct procedures for radar operation and weather avoidance procedures. Radar position error did not exceed 5 NM.

5.4.8.2. Q-. Demonstrated adequate knowledge of equipment, but occasionally used improper operating procedures. Had difficulty identifying radar returns. Radar position error did not exceed 10 NM. Had difficulty identifying radar returns. Weather avoidance was safe with minor deviations from prescribed procedures. Did not update radar/weather analysis during worsening weather conditions.

5.4.8.3. U. Displayed unsatisfactory knowledge of radar equipment. Used improper operating procedures that were potentially harmful to system components. Failed to correctly interpret scope returns. Displayed unsatisfactory knowledge of weather avoidance procedures. Radar position error exceeded Q- criteria.

5.4.9. **Area 77. Navigation Systems:** NOTE: All references to navigation systems refer to actual systems onboard unit aircraft (i.e., INS, CANS , or Global Positioning System (GPS).

5.4.9.1. Q. Had a thorough knowledge of onboard navigation system operating procedures. Effectively used navigation systems to direct the aircraft and updated systems as required.

5.4.9.2. Q-. Had only a basic knowledge of onboard navigation systems. Made minor errors in operation/interpretation of navigation system data. More selective updating could have increased system effectiveness.

5.4.9.3. U. Displayed inadequate knowledge of onboard navigation system procedures. Improper operation procedures could have resulted in damage to equipment or affected mission accomplishment. Failed to update or correctly interpret navigation system data.

5.4.10. **Area 78. Deviation Check:**

5.4.10.1. Q. Correctly computed compass deviation within 2 degrees of actual.

5.4.10.2. Q-. Minor errors in readings or computations. Computations were within 3 degrees of actual.

5.4.10.3. U. Did not accomplish deviation check or exceeded Q- criteria.

5.4.11. **Area 79. TAS Check:**

5.4.11.1. Q. TAS check accomplished on time and error did not exceed 5 knots.

5.4.11.2. Q-. Minor errors in readings or computations. Error did not exceed 10 knots. Completed TAS check late.

5.4.11.3. U. Did not accomplish TAS check or error exceeded 10 knots.

5.4.12. **Area 80. Course and ETA Tolerance:**

5.4.12.1. Q. Remained within 10 NM of course centerline, or within tolerances specified for Required Navigation Performance (RNP) airspace (if applicable), whichever is less. ETAs/ RETAs were within 2 minutes of ATAs. Made effective use of dead reckoning (DR) procedures when required. Accurately determined course deviation for weather.

5.4.12.2. Q-. Remained within 15 NM of course centerline, or within tolerances specified for RNP airspace (if applicable), whichever is less. ETAs/RETAs were within 3 minutes of ATAs. Occasionally used improper DR procedures resulting in erroneous ETAs or headings.

5.4.12.3. U. Exceeded Q- criteria and/or evaluator had to alter aircraft heading to remain within course tolerance, clear special use airspace, or correctly deviate around weather. Unable to use DR procedures.

5.4.13. **Area 81. Fuel Management:**

5.4.13.1. Q. Maintained fuel management IAW directives. Kept pilot advised of fuel status.

5.4.13.2. Q-. Adequate fuel management control with minor computation errors noted. Did not adequately update the pilot on fuel status.

5.4.13.3. U. Failed to demonstrate an understanding of fuel management procedures. Fuel computations not accomplished or contained significant errors. Failed to inform pilot of fuel status.

5.4.14. **Area 82. Defensive Systems Tactics:**

5.4.14.1. Q. Demonstrated satisfactory knowledge of defensive systems tactics and applied appropriate tactics. Made timely and appropriate inputs to crew during mission.

5.4.14.2. Q-. Limited knowledge of defensive systems tactics. Minor errors in tactics selection/execution. Did not make timely inputs to crew during mission.

5.4.14.3. U. Knowledge of defensive systems was unsatisfactory. Unfamiliar with the appropriate tactic for a given scenario. Major errors in tactics selection would have resulted in an unsuccessful mission.

5.4.15. **Area 83. Threat Analysis/Avoidance:**

5.4.15.1. Q. Able to plot threats in-flight and formulate a plan of action to avoid lethal range of given threat system. Executed the proper evasive maneuver in a timely manner when given an immediate threat. Adequately analyzed and degraded all threats ensuring effective mission accomplishment. Was aware of appropriate tactics to avoid threats and exposure.

5.4.15.2. Q-. Made minor errors in plotting and avoiding the lethal range of a given threat system. Slow to execute the proper evasive maneuver. Minor errors in threat analysis or tactics selection.

5.4.15.3. U. Was unable to plot a given threat. Did not avoid lethal range of given threat system. Did not execute an effective evasive maneuver when given an immediate threat. Failed to ensure mission effectiveness by not adequately analyzing or degrading threat(s). Was not aware of appropriate tactics for specific threats or terrain.

5.4.16. **Area 84. Orbit Procedures:**

5.4.16.1. Q. Thorough knowledge of orbit procedures. Met time requirements within 3 minutes. Accurately flew orbit pattern and accomplished computations without significant errors or omissions. Properly coordinated mission location and orbit ETA with MCC. Properly calculated bingo fuel to planned recovery/abort base.

5.4.16.2. Q-. Adequate knowledge of orbit procedures. Minor deviations from published procedures. Met time requirements within 5 minutes. Excessive time devoted to performing computations. Minor coordination errors or omissions with the MCC. Made minor miscalculation of bingo fuel to the planned recovery/abort base.

5.4.16.3. U. Unsatisfactory knowledge of orbit procedures. Did not meet Q- criteria for time requirements. Displayed lack of coordination with MCC. Unable to perform orbit pattern; jeopardized mission accomplishment. Selected an inappropriate abort base or failed to calculate a bingo fuel to safely arrive at an abort base with required fuel reserves. Failed to position the aircraft within planned orbit area.

5.4.17. **Area 85. Air Refueling Procedures:**

5.4.17.1. Q. Effectively accomplished rendezvous and air-to-air refueling procedures. Planned optimum use of all available rendezvous aids. Thorough and complete knowledge of in-flight air-to-air refueling procedures. Arrived at the coordinated air-to-air refueling point within 5 minutes of planned control time. Properly calculated bingo fuel to the planned abort base.

5.4.17.2. Q-. Overlooked use of some rendezvous aids, resulting in a delayed or inefficient rendezvous. Knowledge was sufficient to accomplish rendezvous and air-to-air refueling. Arrived at the coordinated air-to-air refueling point within 10 minutes of planned control time. Made minor miscalculations of bingo fuel to the planned abort base.

5.4.17.3. U. Displayed lack of knowledge or familiarity with the checklist, equipment, and procedures. Limited use of rendezvous aids adversely affected the rendezvous. Arrived at the coordinated air-to-air refueling point in excess of 10 minutes from planned control time. Selected an inappropriate abort base or failed to calculate a bingo fuel to safely arrive at an abort base with required fuel reserves. Failed to position the aircraft within the boundaries of the designated air-to-air refueling track.

5.4.18. **Area 86. Descent/Approach/Landing:**

5.4.18.1. Q. Monitored aircraft position, approach instructions and primary approach navigation aids. Furnished headings, ETAs and other information to the pilot as required. Thoroughly understood approach and missed approach procedures. Ensured terrain clearance during approach by use of all available aids and area chart.

5.4.18.2. Q-. Monitored aircraft position but did not fully understand approach instructions/procedures. Slow to provide headings, ETAs or other appropriate information.

5.4.18.3. U. Failed to monitor aircraft position. Did not ensure terrain clearance during the approach. No area chart available.

5.4.19. **Area 87. Comm Procedures:**

5.4.19.1. Q. Complete knowledge of and compliance with communications procedures. Radio communications (both inter- and intra-cockpit) were concise, accurate, and effectively used to direct actions by the crew to update appropriate agencies of the tactical situation. Consistently monitored primary radio to aid in crew situational awareness. Thoroughly familiar with all communications security requirements and secure voice equipment.

5.4.19.2. Q-. Minor terminology errors or omissions occurred, but did not significantly detract from situational awareness, threat warning, or mission accomplishment. Extraneous comments over primary and secondary radios presented minor distractions. Slow to switch to primary radio; inconsistently monitored primary radio. Displayed limited knowledge of communication security requirements and secure voice equipment.

5.4.19.3. U. Unsatisfactory knowledge of or failure to comply with communications procedures. Radio communications over primary/secondary radios were inadequate or excessive. Inaccurate or confusing terminology significantly detracted from situational awareness, threat warning, or mission accomplishment. Did not monitor primary radio. Displayed inadequate knowledge of communications security requirements and secure voice equipment.

5.4.20. **Areas 88-110.** Reserved for future use.

Chapter 6

FLIGHT ENGINEER EVALUATIONS

6.1. General. The criteria contained in this chapter and **Chapter 3** applies to all flight engineer flight evaluations.

6.2. Objective. The examinee must satisfactorily demonstrate the ability to perform flight engineer duties safely and effectively IAW applicable technical orders, instructions, and directives.

6.3. Requirements:

6.3.1. Mission/Qualification Evaluations. See **Table 2.5** for required evaluation areas. EC-130H flight engineers will normally receive a combined MSN/QUAL evaluation. For individuals unable to participate in MSN activities, administer a QUAL (to include AAR) only. If the mission evaluation is conducted independently of the qualification evaluation, a mission EPE must be conducted and annotated in the ground phase section of the mission AF Form 8

6.3.1.1. Initial mission or mission/qualification evaluations will include in-flight air-to-air refueling and a mission orbit. Recurring mission/qualification evaluations should be scheduled for a combined air-to-air refueling and mission orbit. If initial AAR qualification was established on the previous QUAL evaluation for individuals identified in para **6.3.1**., then the AAR portion of the Initial MSN evaluation can be verbally evaluated.

6.3.2. Mission Evaluations. Mission evaluations will include in-flight air-to-air refueling and will be based on established training scenarios and mission crew training requirements. Threats for takeoff, on-station, tactical repositioning, retrograde procedures and recovery will be based on training required by COMPASS CALL mission crew. Recurring MSN evaluations should be combined with a QUAL evaluation.

6.3.3. Qualification Evaluations. See Table 2.5. for required evaluation areas

6.3.4. Air Refueling.

6.3.4.1. Initial Air Refueling Qualification. Complete initial/requalification air-to-air refueling certification IAW ACC-approved syllabi. Initial qualification should occur on the initial mission evaluation. If unable to complete the mission evaluation due to lack of clearance, a QUAL (to include AAR) or SPOT evaluation should be given to establish qualification in air-to-air refueling. The individual's training records and Unit Letter of Certifications will be updated to reflect the qualification.

6.3.4.2. Recurring Air Refueling Qualification. Following initial/requalification, evaluate this area on mission evaluations. Flight Engineers qualified in AR will be scheduled for an air-to-air refueling profile. As a last resort if AAR cannot be evaluated in flight, SQ/CCs may authorize FEs to verbally evaluate air-to-air refueling provided it is not an initial evaluation, or was not verbally evaluated on the previous evaluation. Failure to evaluate air-to-air refueling does not otherwise affect aircraft qualification.

6.4. Grading Criteria:

6.4.1. **Areas 1 through 20**--use criteria in **Chapter 3** of this volume.

6.4.2. **Areas 21 through 30**--use criteria in **Chapter 3** of this volume (if applicable).

6.4.3. **Area 111. AFTO Form 781 *ARMS Aircrew/Mission Flight Data Document*.**

6.4.3.1. Q. Identified and reported discrepancies in a clear, concise, accurate, and timely manner IAW T.O. 00-20-1, *Aerospace Equipment Maintance Inspection, Documentation, Policies and Procedures* and other applicable directives.

6.4.3.2. Q-. Some information reported incorrectly or incompletely due to errors, omissions, or deviations. Limited knowledge of proper discrepancy reporting IAW T.O. 00-20-1.

6.4.3.3. U. Did not identify or report discrepancies; omitted or incorrectly reported significant information due to errors, omissions, or deviations.

6.4.4. **Area 112. Ground Support Equipment:**

6.4.4.1. Q. Accomplished or demonstrated a satisfactory knowledge of positioning, normal operation, and emergency shutdown of required ground support equipment with no errors, omissions, or deviations.

6.4.4.2. Q-. Accomplished or demonstrated a limited knowledge of positioning, normal operation, and emergency shutdown of required ground support equipment with minor errors, omissions, or deviations that did not jeopardize safety.

6.4.4.3. U. Failed to accomplish or demonstrate adequate knowledge of positioning, normal operation, and emergency shutdown of required ground support equipment that did or could have jeopardized safety.

6.4.5. **Area 113. Refuel/Defuel:**

6.4.5.1. Q. Demonstrated a satisfactory knowledge of or accomplished refuel/defuel operations with no errors, omissions, or deviations from established procedures. Demonstrated a working knowledge of the aircraft the refueling/defueling system and a satisfactory knowledge of concurrent refueling procedures and appropriate safety precautions IAW T.O. 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*.

6.4.5.2. Q-. Demonstrated a limited knowledge of or accomplished refuel/defuel operations with minor errors, omissions, or deviations that did not jeopardize safety. Limited knowledge of the aircraft refueling/defueling system and components.

6.4.5.3. U. Demonstrated inadequate knowledge of or failed to accomplish refuel/defuel operations, made errors, omissions, or deviations that would have jeopardized safety. Demonstrated inadequate knowledge of concurrent refueling operations and appropriate safety precautions.

6.4.6. **Area 114. Takeoff and Landing Data (TOLD):** ***NOTE:_*** If TOLD error is a result of an incorrect gross weight and not due to incorrect computations of performance data, document under Area 129 (Weight and Balance).

6.4.6.1. Q. Correctly computed the TOLD data using applicable performance data and corrections for existing field conditions. Transcribed Mini TOLD data correctly. Was fully knowledgeable of takeoff and landing performance data.

6.4.6.1.1. TOLD criteria:

6.4.6.1.1.1. Required Airspeeds +/-2 knots.

6.4.6.1.1.2. Required Distances +/- 200 feet.

6.4.6.1.1.3. Predicted Takeoff Torque +/- 200 in/lbs.

6.4.6.2. Q-. Minor errors in the use of applicable performance charts, computing the performance data, or correcting for existing field conditions resulting in data exceeding Q criteria. Incorrectly transcribed Mini TOLD data. Had some knowledge of takeoff and landing performance data. Would not have compromised safety of flight.

6.4.6.2.1. TOLD criteria:

6.4.6.2.1.1. Required Airspeeds +/- 4 knots.

6.4.6.2.1.2. Required Distances +/- 400 feet.

6.4.6.2.1.3. Predicted Takeoff Torque +/- 400 in/lbs.

6.4.6.3. U. Failed to compute TOLD data, omitted necessary corrections for existing field conditions, or errors in computing performance data resulted in airspeeds and/or distances exceeding Q- criteria. Limited knowledge of takeoff and landing performance data would have compromised safety of flight.

6.4.7. **Area 115. Cockpit.**

6.4.8. **Area 116. Before Starting Engines/Starting Engines.**

6.4.9. **Area 117. Before Taxi/Taxi.**

6.4.10. **Area 118. Before Takeoff/Lineup.**

6.4.11. **Area 119. After Takeoff.**

6.4.12. **Area 120. En route.**

6.4.13. **Area 121. Tactical/Mission Employment**

6.4.14. **Area 122. Descent/Before Landing.**

6.4.15. **Area 123. After Landing.**

6.4.16. **Area 124. Engine Shutdown.**

6.4.17. **Area 125. Before Leaving Airplane.**

6.4.18. **Areas 115 through 125** - use the following criteria:

6.4.18.1. Q. Accomplished required checklists without errors, omissions, or deviations. Backed up pilots on flight parameters (i.e. altitudes, airspeeds, and clearances). Satisfactorily monitored engine/system indicators. Fully knowledgeable of performance charts and procedures required to obtain and record in-flight performance data. Fuel system usage and configuration was IAW flight manual and applicable directives.

Recognized and corrected minor omissions or deviations. Recognized, reported, and properly documented out of limit conditions or malfunctions.

6.4.18.2. Q-. Accomplished required checklists with minor errors, omissions, or deviations. Backed up pilots on flight parameters (i.e. altitudes, airspeeds, and clearances) with some deviations. Monitored engine/system indicators with some deviations. Limited knowledge of performance charts and procedures required to obtain and/or record in-flight performance data. Limited knowledge of fuel system usage and configuration caused deviations from flight manual and applicable directives. Slow to recognize, report, and/or document out of limit conditions or malfunctions.

6.4.18.3. U. Failed to accomplish required checklists or made numerous errors, omissions, or deviations. Failed to back up pilots on flight parameters (i.e. altitudes, airspeeds, and clearances). Failed to monitor engine/system indicators. Inadequate knowledge of performance charts and/or procedures required to obtain data for two or three engines operating. Had inadequate knowledge of fuel system usage and configuration. Allowed limitations to be exceeded, which, without correction, would cause damage to equipment.

6.4.19. **Area 126. Postflight:**

6.4.19.1. Q. Accomplished required checklists without errors, omissions, or deviations. Insured aircraft properly configured for parking. [i.e. nose gear pin, ground wires (if applicable), intakes, door locks]

6.4.19.2. Q-. Accomplished required checklists with minor errors, omissions, or deviations. Minor errors insuring aircraft properly configured for parking.

6.4.19.3. U. Failed to accomplish required checklists. Did not insure aircraft was properly configured for parking.

6.4.20. **Area 127. Mission Procedures:**

6.4.20.1. Q. Was fully knowledgeable of unit mission procedures. Was knowledgeable of mission events. Demonstrated adequate situational awareness.

6.4.20.2. Q-. Had limited knowledge of unit mission procedures. Demonstrated limited knowledge of mission events. Limited situational awareness.

6.4.20.3. U. Inadequate knowledge of unit mission procedures. Had inadequate knowledge of mission events. Had inadequate situational awareness.

6.4.21. **Area 128. Air Refueling System/Procedures:**

6.4.21.1. Q. Was fully knowledgeable of air-to-air refueling operations and procedures. Performed all pre-refueling, refueling, and post-refueling checks in accordance with applicable checklist and directives. Correctly identified and located system components, explained and related their functions, and specified the limitations. Stated correct system status and its effect on related systems. Recognized malfunctions and applied proper corrective action(s).

6.4.21.2. Q-. Limited knowledge of air-to-air refueling operations and procedures. Performed pre-refueling, refueling, and post-refueling checks with some minor deviations/omissions that did not affect successful accomplishment of air-to-air refueling.

Limited knowledge of identification and location of system components, their functions and limitations. Stated correct system status, but could not determine its effect on related systems. Delay in recognizing malfunctions and/or applying proper corrective action(s).

6.4.21.3. U. Inadequate knowledge of air-to-air refueling operations and procedures. Deviations/omissions would have affected successful accomplishment of air-to-air refueling. Could not identify, locate, or relate systems functions and limitations. Could not determine status of system or its effect on related system. Failed to recognize malfunctions and/or apply corrective action(s).

6.4.22. **Area 129. Weight and Balance:**

6.4.22.1. Q. Had satisfactory knowledge of aircraft limitations and weight and balance directives. Completed DD Form 365-4, *Weight and Balance Clearance Form F - Transport* legibly and accurately with only minor errors.

6.4.22.1.1. Takeoff or landing gross weights	+/- 500 lbs.
6.4.22.1.2. Percent of MAC	+/- 0.5 percent.
6.4.22.1.3. Aircraft gross takeoff limits	Not exceeded.
6.4.22.1.4. Center of gravity limitations	Not exceeded.

6.4.22.2. Q-. Limited knowledge of aircraft limitations and weight and balance directives. Completed DD Form 365-4 legibly.

6.4.22.2.1. Takeoff or landing gross weights	+/- 501 to 1,000 lbs.
6.4.22.2.2. Percent of MAC	+/- 0.6 to 1.0 percent.
6.4.22.2.3. Aircraft gross takeoff limits	Not exceeded.
6.4.22.2.4. Center of gravity limitations	Not exceeded.

6.4.22.3. U. Had inadequate knowledge of aircraft limitations and weight and balance directives. Failed to complete DD Form 365-4 accurately.

6.4.22.3.1. Takeoff or landing gross weights	+/- 1,000 lbs.
6.4.22.3.2. Percent of MAC	+/- 1.0 percent.
6.4.22.3.3. Aircraft gross takeoff limits	Exceeded.
6.4.22.3.4. Center of gravity limits	Exceeded.

6.4.23. **Area 130. Defensive Systems/Tactics:**

6.4.23.1. Q. Demonstrated satisfactory knowledge of defensive systems/tactics. Applied appropriate tactics to avoid the threat and minimize exposure. Made timely and appropriate inputs to crew during mission.

6.4.23.2. Q-. Limited knowledge of defensive systems/tactics. Minor errors in threat analysis or tactics selection/execution. Did not make timely inputs to crew during mission.

6.4.23.3. U. Knowledge of defensive systems was unsatisfactory. Unfamiliar with the appropriate tactic for a given scenario. Major errors in threat analysis or tactics selection would have resulted in an unsuccessful mission.

6.4.24. **Areas 131 – 140. Reserved for future use.**

Chapter 7

AIRBORNE MAINTENANCE TECHNICIAN (AMT) EVALUATIONS

7.1. General. The criteria in this chapter and **Chapter 3** apply to all AMT flight evaluations. The CCMCS will not be used for any AMT evaluation.

7.2. Objective. The examinee must satisfactorily demonstrate the ability to safely and effectively perform the AMT duties within his/her assigned area of responsibility, including the operation of appropriate aircraft systems. These duties must be performed in accordance with applicable manuals, instructions, and directives.

7.3. Requirements:

7.3.1. Mission/Qualification Evaluations. See **Table 2.6** for required areas (as applicable).

7.3.1.1. All COMPASS CALL AMT MSN/QUAL evaluations will be conducted on scheduled mission sorties. Mission scenarios will be based on mission crew training requirements. AAR duties must be evaluated. If a tanker is not available, AAR duties should be evaluated in-flight by demonstration of procedures. If AAR cannot be evaluated in flight, AAR may be verbally evaluated at FE discretion. All initial and recurring MSN/QUAL evaluations require a full mission preflight.

7.4. Grading Criteria:

7.4.1. **Areas 1 through 20**--use criteria in **Chapter 3** of this volume.

7.4.2. **Areas 21 through 30**--use criteria in **Chapter 3** of this volume (if applicable).

7.4.3. **Area 141. Pre-Takeoff:** ***NOTE:*** Includes all activity from Before Starting Engines to Takeoff.

7.4.3.1. Q. Accomplished procedures in accordance with approved checklists and applicable directives. Correct positioning to monitor engine area during start. Correct ground marshaling signals. Recognized and correctly responded to malfunctions in a safe and timely manner. Properly prepared aircraft and equipment prior to takeoff. Effectively monitored and assisted the pilot by clearing outside the aircraft for obstacles/ground traffic during taxi.

7.4.3.2. Q-. Accomplished procedures with minor errors, omissions, or deviations. Slow to recognize or respond to malfunctions. Minor errors when positioning to monitor engine start or giving required ground marshaling signals. Minor errors in preparing aircraft and equipment prior to takeoff. Provided limited or inadequate monitoring outside the aircraft for clearing of obstacles/ ground traffic during taxi.

7.4.3.3. U. Accomplished procedures with major errors, omissions, or deviations. Major errors when positioning to monitor engine area during start sequence. Failed to ensure engine/GTC (gas turbine compressor) was clear of personnel or equipment before starting. Failed to recognize or respond to malfunctions. Major errors when providing ground marshaling signals, jeopardizing safety. Major errors or omissions in preparing aircraft and equipment prior to takeoff. Failed to provide any monitoring or assistance to the pilot during taxi operations, which jeopardized safety.

7.4.4. **Area 142. After Takeoff/System Startup:**

7.4.4.1. Q. Conducted procedures in accordance with applicable checklist items and procedures. Conducted a thorough inspection of cargo compartment and ensured that passengers complied with instructions. Ensured applicable mission system equipment was started properly. Performed all required checks.

7.4.4.2. Q-. Conducted procedures with minor errors or omissions which did not affect safety of flight. Conducted a limited inspection of cargo compartment. Performed required checks with omissions or deviations, which did not affect safety of flight. Slow to initialize mission system, which did not affect mission accomplishment.

7.4.4.3. U. Failed to accomplish procedures or made major errors, omissions, or deviations, which affected or could have affected safety of flight. Failed to inspect cargo compartment or ensure passenger compliance with instructions. Failed to initialize mission system in a timely manner which negatively affected mission accomplishment.

7.4.5. **Area 143. Level Off/Cruise/En route:**

7.4.5.1. Q. Performed all required checks thoroughly with no deviations. Monitored operation of aircraft/mission systems on a frequent basis. Corrective maintenance actions were implemented in a timely manner as capabilities permit.

7.4.5.2. Q-. Performed required checks with minor errors, omissions or deviations, which did not affect safety of flight or mission accomplishment. Conducted limited/infrequent monitoring of aircraft/mission systems.

7.4.5.3. U. Failed to perform required checks or made major errors, omissions, or deviations, which affected safety of flight or mission accomplishment. Failed to provide adequate monitoring of aircraft/mission systems.

7.4.6. **Area 144. Aircraft Systems:** ***NOTE:_*** Evaluate the following areas: Engines/GTC/ATM (air turbine motor), hydraulic systems, ramp and door, landing gear, flaps, electrical systems, bleed air/air conditioning, and aircraft defensive systems . These areas may be divided into sub-areas by local supplement for trending purposes.

7.4.6.1. Q. Demonstrated or determined proper system operation. Correctly identified and located applicable system components. Correctly determined status of system. Knowledgeable of or could identify associated warning/cautions/notes for applicable systems.

7.4.6.2. Q-. Minor deviations in systems operation, which did not affect mission accomplishment. Made omissions or deviations in identification or location of system components. Was unsure of system status. Limited knowledge of required duties or applicable systems warning/cautions/ notes.

7.4.6.3. U. Improperly operated systems. Could not identify/locate system components. Could not determine status of system. Had insufficient knowledge of required duties, or applicable systems warning/cautions/notes. Major errors, omissions, or deviations, which adversely affected mission accomplishment.

7.4.7. **Area 145. Air Refueling:**

7.4.7.1. Q. Adequate knowledge of air-to-air refueling system components and locations. Accomplished all air-to-air refueling procedures without error, including leak checks during contact, in accordance with approved checklist and directives. Properly configured the aircraft and mission system (if applicable) prior to completion of the Preparation For Contact checklist. Accomplished a post air-to-air refueling mission system configuration in accordance with checklist and directives (if applicable).

7.4.7.2. Q-. Limited knowledge of air-to-air refueling system components and locations. Accomplished air-to-air refueling procedures with minor errors, omissions, or deviations. Performed limited checks during contact. Performed aircraft and mission system configuration with minor errors or omissions that did not affect successful mission accomplishment.

7.4.7.3. U. Inadequate knowledge of air-to-air refueling system components and/or locations. Accomplished air-to-air refueling procedures with major errors, omissions, or deviations critical to safety of flight. Failed to properly configure aircraft and mission system (if applicable) before completion of Preparation For Contact checklist. Failed to perform required checks during contact. Accomplished post air-to-air refueling mission system configuration with major errors, omissions, or deviations causing critical loss of data or unsuccessful completion of the mission.

7.4.8. **Area 146. Communications:**

7.4.8.1. Q. Monitored/correctly set up interphone. Monitored/employed radios as necessary. Exercised proper interphone/radio procedures, using correct terminology. Knowledge/operation of communications systems was thorough. Responded to all challenges/instructions, and maintained an excellent listening watch of all appropriate communications systems.

7.4.8.2. Q-. Occasionally interrupted other transmissions. Limited knowledge/operation of communications systems. Occasionally failed to respond to interphone/radio calls or used non-standard terminology.

7.4.8.3. U. Failed to respond to interphone interrogations. Made excessive transmissions that denied interphone or radio access to others with more essential information. Unsatisfactory knowledge about, and operation of, communications systems. Rarely monitored radios or failed to employ them effectively. Caused confusion, which jeopardized mission accomplishment or caused excessive delays.

7.4.9. **Area 147. Trouble Analysis/Corrective Action:**

7.4.9.1. Q. Had adequate knowledge of system analysis and troubleshooting techniques in accordance with manuals, directives, and locally approved established procedures. Logical techniques and procedures when using the computer terminal, operator keyboard, Built-in-Test (BIT), and available test equipment to confirm and evaluate Primary Mission Equipment (PME) malfunctions. Effective action in isolating, and applying corrective action to, the PME malfunctions. Utilized and properly applied available resources to maintain an operational system. Kept mission crew informed of operational limitations, and advised on possible work-arounds.

7.4.9.2. Q-. Limited knowledge of system analysis and logical troubleshooting techniques. Limited knowledge of procedures and techniques when using the computer terminal, operator keyboard, BIT, and available test equipment to confirm, diagnose and isolate PME malfunctions. Uncertain as to what corrective action was required. Unfamiliar with what resources were available to maintain an operational system. Kept mission crew informed, but supplied inaccurate information.

7.4.9.3. U. Knowledge of system analysis and troubleshooting techniques was inadequate. Failed to use the computer terminal, operator keyboard, BIT, and available test equipment to confirm, diagnose, and isolate PME malfunctions. Unable to apply corrective action to the system malfunctions. Did not know what resources were available to maintain an operational system. Did not inform mission crew of system limitations or possible work-arounds.

7.4.10. **Area 148. System Shutdown/Descent:**

7.4.10.1. Q. Ensured applicable mission system equipment was shutdown properly. Proper procedures in terminating archive tape and creating required data tape(s) if applicable. Performed all required duties. Inspected cargo/mission compartment for security.

7.4.10.2. Q-. Accomplished applicable procedures and duties with minor errors, omissions, or deviations that did not affect safety of flight or jeopardize mission accomplishment. Limited knowledge of procedures required to terminate the archive tape or creating a required data tapes(s), if applicable. Performed a limited inspection of cargo/mission compartment for security.

7.4.10.3. U. Major errors, omissions, or deviations during shutdown of applicable mission system equipment and other required duties adversely affecting mission accomplishment. Failed to perform termination of archive tape or create require data tape(s) correctly, causing loss of critical data, if applicable. Failed to accomplish a satisfactory inspection of the cargo/mission compartment for security.

7.4.11. **Area 149. Before Landing:**

7.4.11.1. Q. Inspected cargo/mission compartment. Accomplished procedures in accordance with approved checklist and directives. Visually inspected applicable aircraft systems. Confirmed applicable equipment was shutdown.

7.4.11.2. Q-. Performed required duties with minor errors, omissions or deviations which did not affect safety of flight.

7.4.11.3. U. Failed to inspect cargo/mission compartment. Failed to perform required checks or made major errors, omissions, or deviations. Failed to properly secure loose equipment/cargo. Failed to visually inspect applicable aircraft systems.

7.4.12. **Area 150. After Landing/Engine Shutdown:**

7.4.12.1. Q. Completed all applicable checklist items and post flight duties in a safe and timely manner. Shut off all equipment and stowed gear properly. Fully debriefed maintenance personnel.

7.4.12.2. Q-. Minor omissions or deviations, which did not cause equipment damage. Maintenance debrief was adequate with minor omissions. .

7.4.12.3. U. Major omissions or deviations while completing applicable checklist items and duties. Equipment stowage or shutdown, which would result in damage to equipment was improper. Displayed an unsafe practice, which could cause damage to aircraft or injury to personnel. Failed to stow equipment. Failed to accomplish debriefing requirements.

7.4.13. **Area 151. Mission Termination:**

7.4.13.1. Q. Accomplished mission termination procedures in accordance with applicable checklists and directives. Attended required mission debriefings. Provided accurate and concise information. Ensured all applicable mission materials were given to the debriefers, when required. Debriefing was accomplished in accordance with current directives and procedures. Returned professional equipment to appropriate storage areas in accordance with current directives and procedures.

7.4.13.2. Q-. Accomplished mission termination procedures with minor errors, omissions, or deviations. Inattentive during mission debriefings. Provided limited but accurate information. Was unsure of proper procedures when returning mission materials to debriefers. Debriefing was accomplished with minor, errors, omissions, or deviations. Unfamiliar with procedures when returning professional equipment to appropriate storage areas.

7.4.13.3. U. Accomplished mission termination procedures with major errors, omissions, or deviations. Failed to attend required mission debriefings. Failed to provide accurate information. Failed to turn in all required mission materials to debriefers. Debriefing was accomplished with major errors, omissions, or deviations. Failed to return professional equipment to appropriate storage areas or in accordance with current directives and procedures.

7.4.14. **Area 152. Raids/BP1/BP2/BP3**

7.4.15. **Area 153. RFR.**

7.4.16. **Area 154. Acquisition Subsystem.**

7.4.17. **Area 155. SCM**

7.4.18. **Area 156. Analysis Subsystem.**

7.4.19. **Area 157. Exciter Subsystem.**

7.4.20. **Area 158. RFT.**

7.4.21. **Area 159. DF Subsystem.**

7.4.22. **Area 160. Spear Subsystem.**

7.4.23. **Area 161. High Band Systems.**

7.4.24. **Area 162. External Communications.**

7.4.25. **Area 163. Tech Station Subsystem.**

7.4.26. **Area 164. Human-Machine Interface**

7.4.27. **Area 165. DPS**

7.4.28. **Area 166. SS1/SS2**

7.4.29. **Area 167. AXE**

7.4.30. **Areas 152 through 167.** - use the following criteria.

7.4.30.1. Q. Adequate operational knowledge of the applicable system. Demonstrated proper procedure to call up, use, and exit the help file, when needed. Performed call up of appropriate pages applicable to mission accomplishment and was familiar with the contents and use of these pages. Understood operator keyboard functions. Explained Line Replaceable Unit (LRU) interfacing and functions of operation for the applicable subsystem. Properly monitored system performance.

7.4.30.2. Q-. Limited operational knowledge of the applicable subsystem. Accomplished procedures to call up, and exit the help file, when needed, with minor errors or omissions that did not adversely affect mission accomplishment. Unsure or hesitant when calling up appropriate pages or demonstrated a limited knowledge of the use and contents of these pages. Unfamiliar with operator keyboard functions. Limited knowledge of LRU interfacing and functional operation of each LRU within the applicable subsystem. Slow to monitor system performance during operation.

7.4.30.3. U. Unsatisfactory operational knowledge of the applicable subsystem. Unable to call up, use, and exit the help file, when needed, with major errors or omissions, causing critical loss of mission data, or adversely affecting mission accomplishment. Failed to call up appropriate pages and/or unfamiliar with the use and contents of these pages. Did not know keyboard functions. Did not know LRU interfacing or the functional operation of each LRU within the applicable subsystem. Failed to monitor system performance during operation.

7.4.31. **Area 168. Reverse Taxi:**

7.4.31.1. Q. Complied with all directives concerning reverse taxi. Properly configured mission compartment for reverse taxi. Provided timely instructions to the pilot. Positioned aircraft as briefed by the pilot.

7.4.31.2. Q-. Minor deviations to reverse taxi procedures. Used non standard terminology but no compromise of safety. Slow to provide instructions. Aircraft not positioned as briefed by the pilot.

7.4.31.3. U. Major deviations to procedures/directives. Failed to use appropriate terminology that created doubts or confusion. Aircraft control was unsafe or could have resulted in damage to the aircraft or property, or injury to personnel.

7.4.32. **Areas 169 - 190. Reserved for future use.**

Chapter 8

COMPASS CALL MISSION CREW EVALUATIONS

8.1. General. The criteria contained in this chapter and **Chapter 3** applies to all COMPASS CALL Mission Crew flight evaluations.

8.2. Objective. The examinee must satisfactorily demonstrate the ability to perform all mission crew duties safely and effectively, including the operation of appropriate aircraft systems, IAW applicable technical orders, instructions, and directives.

8.3. Requirements:

8.3.1. Mission/Qualification Evaluations. See **Table 2.7** for required evaluation areas. Evaluation profiles will vary by area of responsibility based on mission kit and simulator scenario availability. Threats for takeoff, on station, and recovery as well as tactical repositioning and retrograde procedures may be input by the FE and will be based on the scenario and evaluation requirements. Scenarios should incorporate sufficient threats to adequately assess the examinee's knowledge of potential enemy orders of battle and threat capabilities. SRMCC/MCC and MCS/ANO/AO Crew Position Indicators are similar aircrew specialties for evaluation purposes.

8.3.1.1. Mission crew INIT MSN/QUAL evaluations will be conducted in accordance with current ACC syllabi. All other SRMCC, MCC, MCS, ANO, AO, and initial Mission Crew Instructor evaluations may be conducted in the aircraft and/or CCMCS.

8.3.1.2. More than one mission crew position may be evaluated on a sortie provided a separate evaluator is assigned for each crew position.

8.3.1.3. Additional crewmembers may complete elements from previously incomplete evaluations, provided the primary evaluation is not impacted, without additional evaluators.

8.3.1.4. MCS evaluations should be conducted by evaluators of like Crew Position Indicator. MCS evaluations will include an ART unless ANO/AO qualification does not apply to an examinee. Cross-Crew Position Indicator evaluations update MCS and ANO/AO qualifications as required. MCS evaluations will include search and targeting of signals to update ANO or AO qualification on the letter of certifications. This should be completed during phases of flight the examinee will not be performing primary duties as the MCS. Should these areas not be evaluated, ANO or AO qualification will not be updated and the examiner will annotate applicable restrictions on the AF Form 8. When the individual upgrading to MCS is already an instructor qualified ANO/AO, instructional ability will be evaluated as an ANO/AO. Instructional ability will not be evaluated in the upgrade crew position.

8.3.1.5. If no FE of the same language is available for Analysis Operator (not MCS qualified) evaluations in the CCMCS, the most experienced Analysis Operator available, who is of the same language as the examinee, will be scheduled to translate for the FE.

8.3.1.6. Mission crewmember evaluations may be conducted in either the aircraft or the CCMCS.

8.4. Grading Criteria:

8.4.1. **Areas 1 through 20**--use criteria in **Chapter 3** of this volume.

8.4.2. **Areas 21 through 30**--use criteria in **Chapter 3** of this volume (if applicable).

8.4.3. **Area 231. Mission Crew Planning**

8.4.3.1. **Senior Mission Crew Commander Criteria:**

8.4.3.1.1. Q. Efficiently supervised the mission crew in analyzing the combat mission tasking. Developed a comprehensive electronic attack (EA) plan to include narrowband, Special Emitter Array (SPEAR) and FE selected advanced capability. Extracted, as applicable, all information from the Air Tasking Order (ATO), Airspace Control Order (ACO), Special Instructions (SPINS), Air Strike Request (ASR), and Electronic Attack Request Form (EARF). Coordinated, prioritized, and refined effects based EA plan with support from Electronic Warfare Coordination Cell (EWCC), Air Operations Center (AOC), and liaison elements. Specific mission objectives support mission profile and aircrew training. Incorporated required mission planning forms for local area evaluations.

8.4.3.1.2. Q-. Supervised mission crew in analyzing the combat mission requirements and coordinated mission tasking, but with minor errors or omissions that did not degrade overall mission accomplishment. Minor errors or omissions in developing a plan to execute required electronic countermeasures in support of the ATO. Mission objectives and EA planning lacked specificity required for optimal mission and training support.

8.4.3.1.3. U. Errors or omissions in supervising the mission crew in analyzing the combat mission tasking that prevented mission accomplishment. Developed an ineffective electronic countermeasures plan in support of the ATO. Mission objectives and EA plan did not support Commander's Intent and/or training requirements.

8.4.3.2. **Mission Crew Commander Criteria:**

8.4.3.2.1. Q. Efficiently supervised the mission crew in analyzing the combat mission tasking. Extracted all applicable information from the ATO, ACO, SPINS and applicable intelligence sources. Developed a comprehensive plan to execute required electronic countermeasures in support of the ATO.

8.4.3.2.2. Q-. Supervised the mission crew in analyzing the combat mission tasking, but with minor errors or omissions that did not degrade overall mission accomplishment. Minor errors or omissions in developing a plan to execute required electronic countermeasures in support of the ATO.

8.4.3.2.3. U. Errors or omissions in supervising the mission crew in analyzing the combat mission tasking that prevented mission accomplishment. Developed an ineffective electronic countermeasures plan in support of the ATO.

8.4.3.3. **Mission Crew Supervisor, Acquisition Operator, Analysis Operator Criteria:**

8.4.3.3.1. Q. Checked all factors applicable to the mission. Complied with SRMCC/MCC/MCS directives. Demonstrated sufficient knowledge to complete mission planning in an effective manner. Complied with directives. Demonstrated knowledge of available alternatives.

8.4.3.3.2. Q-. Checked all information required to complete mission planning, but with minor errors or omissions that did not degrade mission accomplishment. Knowledge was incomplete or inaccurate, but sufficient to complete mission planning. Minor deviations from directives or SRMCC/MCC/MCS instructions.

8.4.3.3.3. U. Errors or omissions in mission planning that prevented mission accomplishment. Target knowledge was insufficient to complete mission planning. Deviations in procedures resulted in incomplete/inaccurate planning.

8.4.4. **Area 232. Communications Equipment:**

8.4.4.1. Q. Knowledge of equipment and its operation was thorough. Performed system loading in accordance with published procedures. Checked and verified equipment for proper system operation.

8.4.4.2. Q-. Knowledge of equipment and its operation was limited. Minor errors or occasional deviations in correct loading or check/verification procedures. Unnecessary delays loading, checking, or verifying equipment for proper operation.

8.4.4.3. U. Knowledge of equipment and its operation was inadequate. Major errors or used incorrect procedures that prevented loading and use of the equipment. Failed to load, check, or verify equipment for proper operation.

8.4.5. **Area 233. System Setup:**

8.4.5.1. Q. Complete knowledge of system operating parameters and mission data entries. Entered/checked appropriate parameters and data required for successful mission accomplishment. Completed system setup in a timely manner.

8.4.5.2. Q-. Limited knowledge of systems operating parameters and mission data entries. Minor errors or omissions when entering/checking parameters and data but did not deter mission accomplishment. Slow to complete system setup.

8.4.5.3. U. Displayed inadequate knowledge of system operating parameters and mission data entries. Major errors or omissions when entering/checking parameters and data that prevented successful mission accomplishment. Delay in system setup was detrimental to mission accomplishment.

8.4.6. **Area 234. Mission Equipment System Knowledge/Operation:**

8.4.6.1. Q. Manipulated required system to obtain the desired mission results. Thorough knowledge of system components, operation, and limitations to accomplish all tasks defined in directives or as assigned by the SRMCC/MCC/MCS.

8.4.6.2. Q-. Minor errors in manipulating required system to obtain the desired mission results. Could not identify all major system components. Assigned tasks were completed in a consistently slow or hesitant manner that did not significantly degrade mission effectiveness.

8.4.6.3. U. Failed to manipulate the required system to obtain desired mission results. Displayed inadequate knowledge of system components, operation, and limitations. Could not complete assigned tasks due to unsatisfactory knowledge of system operation. Task accomplishments consistently slow to the point that mission effectiveness was significantly degraded.

8.4.7. **Area 235. Tactical Employment:**

8.4.7.1. Q. Employed weapon system in accordance with directives. Made timely adjustments for limitations imposed by tactical situation, threats, terrain, or equipment failure/degraded operations and tasking.

8.4.7.2. Q-. Minor errors or deviations from directives while employing weapons system but did not prevent accomplishment of the mission. Slow to make adjustments for limitations imposed by tactical situation, threats, terrain, or equipment failure/degraded operations.

8.4.7.3. U. Major errors or deviations from directives that prevented accomplishment of the mission. Made inadequate adjustments for limitations imposed by tactical situation, threats, terrain, or equipment failure/degraded operations.

8.4.8. **Area 236. Target/Threat Knowledge:**

8.4.8.1. Q. Had sufficient knowledge of the applicable theater of operations and orders of battle. Accurately described the operations, components and limitations of targeted weapon systems.

8.4.8.2. Q-. Limited knowledge of the theater of operations and orders of battle which degraded mission accomplishment. Minor errors in describing the operations, components and limitations of targeted weapon systems.

8.4.8.3. U. Knowledge of the theater of operations and orders of battle was inadequate and prevented mission accomplishment. Could not describe operations, components and limitations of targeted weapon systems.

8.4.9. **Area 237. Jamming Operations/Antenna Orientation/Timing:**

8.4.9.1. **Senior Mission Crew Commander Criteria**

8.4.9.1.1. Q. Initiated jamming of required systems IAW EA plan within one minute of preplanned or scheduled window. If tactical situation dictated a change in the jam window, adjustments were made as required. Conducted jamming look-through periods as required to ensure situational awareness was maintained throughout the entire jam window. Ensured transmit configuration and RF patch panel settings aligned with EA tasking requirements. Applicable systems antennas were oriented toward the target environment prior to jam initiation and throughout the mission.

8.4.9.1.2. Q-. Delayed jamming of a preplanned window for more than one minute but less than two minutes. Jam window adjustments were made but not optimal for the tactical situation. Conducted limited jamming look-through periods as required resulting in degraded situational awareness. Errors in transmit configuration and/or RF patch panel settings that did not prevent mission accomplishment. Antennas

momentarily oriented away from the target environment prior to initiation of jamming or throughout the mission.

8.4.9.1.3. U. Failed to initiate jamming within two minutes of a preplanned or scheduled window. Failed to make adjustments in the jam window when the tactical situation dictated a change. Failed to conduct jamming look-through periods as required resulting in a complete loss of situational awareness. Transmit configuration and/or RF patch panel settings prevented employment of required subsystem(s). Antennas were consistently oriented away from the target environment resulting in an adverse impact on mission accomplishment.

8.4.9.2. **Mission Crew Commander Criteria**

8.4.9.2.1. Q. Initiated jamming of narrowband and/or SPEAR system(s) within one minute of preplanned or scheduled window. Conducted jamming look-through periods to ensure situational awareness was maintained throughout the entire jam window. Ensured transmit configuration and RF patch panel settings aligned with narrowband and/or SPEAR tasking. Ensured the narrowband and/or SPEAR antennas were oriented toward the target environment/area prior to jam initiation and throughout the mission.

8.4.9.2.2. Q-. Delayed jamming of a preplanned window for more than one minute but less than two minutes. Jam window adjustments were made but not optimal for the tactical situation. Conducted limited jamming look-through periods resulting in degraded situational awareness. Errors in transmit configuration and/or RF patch panel settings that did not prevent mission accomplishment. Narrowband and/or SPEAR antennas were momentarily oriented away from the target environment/area prior to initiation of jamming or during the mission.

8.4.9.2.3. U. Failed to initiate jamming within two minutes of a preplanned or scheduled window. Failed to make adjustments in the jam window when the tactical situation dictated a change. Failed to conduct jamming look-through periods resulting in a complete loss of situational awareness. Transmit configuration and/or RF patch panel settings prevented employment of required subsystem(s). Narrowband and/or SPEAR antennas were consistently oriented away from the target environment/area resulting in an adverse impact on mission accomplishment.

8.4.10. **Area 238. Allocation/Use of Jamming/Radiate Resources:**

8.4.10.1. **Senior Mission Crew Commander Criteria:**

8.4.10.1.1. Q. Had thorough knowledge of and monitored appropriate jam management displays for evaluation of system effectiveness. Thorough knowledge of jamming resources. Allocation of jamming resources was optimal and appropriate for required jamming operations. Effectively deconflicted separate jamming systems. Appropriate targets were echeloned/loaded, activated, and jammed when required.

8.4.10.1.2. Q-. Limited knowledge/monitoring of appropriate jam management displays. Limited knowledge of jamming resources. Minor errors in allocation of jamming resources that did not deter from overall jamming operations. Minor errors

or omissions in deconflicting jamming systems that did not prevent mission accomplishment. Unnecessary delays in activation of appropriate targets.

8.4.10.1.3. U. Inadequate knowledge of/failed to monitor jam management displays. Inadequate knowledge of jamming resources. Major errors in allocation of jamming resources that prevented mission accomplishment. Failed to deconflict jamming systems resulting in prevention of mission accomplishment. Failed to activate targets at required times such that appropriate targets were not jammed.

8.4.10.2. **Mission Crew Commander Criteria:**

8.4.10.2.1. Q. Had thorough knowledge of and monitored appropriate narrowband jam management and/or SPEAR displays for evaluation of system effectiveness. Thorough knowledge of narrowband jamming resources. Allocation of jamming resources was optimal and appropriate for jamming operations. Appropriate targets were echeloned, activated, and jammed when required. Effectively employed SPEAR IAW EA plan and resource availability.

8.4.10.2.2. Q-. Limited knowledge/monitoring of appropriate narrowband jam management and/or SPEAR displays. Limited knowledge of narrowband jamming resources. Minor errors in allocation of narrowband jamming resources that did not deter from appropriate jamming operations. Unnecessary delays in activation of appropriate targets. SPEAR employment momentarily deviated from EA plan.

8.4.10.2.3. U. Inadequate knowledge of/failed to monitor narrowband jam management and/or SPEAR displays. Inadequate knowledge of narrowband jamming resources. Major errors in allocation of narrowband jamming resources resulting in mission failure. Failed to activate targets at required times such that required targets were not jammed.

8.4.11. **Area 239. Tactical Situation Monitoring:**

8.4.11.1. Q. Correlated intelligence and operations inputs to stay abreast of the tactical situation. Analyzed incoming information and disseminated appropriate data in a timely manner.

8.4.11.2. Q-. Did not completely correlate operations and intelligence inputs to remain abreast of the tactical situation. Disseminated critical information but caused some delays.

8.4.11.3. U. Failed to remain sufficiently abreast of the tactical situation that impaired effective mission accomplishment. Failed to pass critical data to operators in need of the information.

8.4.12. **Area 240. Signal Environment Analysis:**

8.4.12.1. **Mission Crew Supervisor Criteria:**

8.4.12.1.1. Q. Completed echelon construction actions as reflected in mission planning documents. Accurately and efficiently placed targeted signals in proper echelon(s) based on tasking priorities and rules of engagement (ROE). Monitored status of target echelons/signals and coordinated effective use of resources. Accurately analyzed and targeted signals of interest when required.

8.4.12.1.2. Q-. Echelon construction did not accurately reflect mission planning documents, but did not significantly degrade mission accomplishment. The echeloning of targeted signals was occasionally inaccurate or slow. Did not consistently monitor signal and/or echelon status, resulting in inefficient resource allocation. Required signal analysis was occasionally inaccurate but did not jeopardize mission accomplishment.

8.4.12.1.3. U. Failed to construct echelon system or deviated significantly to the point that mission could not be accomplished as planned. Failed to echelon or analyze signals, which prevented mission accomplishment.

8.4.12.2. Acquisition Operator, Analysis Operator Criteria:

8.4.12.2.1. Q. Employed effective signal search procedures. Accurately identified target signals. Adjusted operations/dispositioned signal IAW existing directives, SRMCC/MCC/MCS guidance and the tactical situation.

8.4.12.2.2. Q-. Occasionally demonstrated ineffective signal search procedures. Signal analysis was occasionally inaccurate or slow and impaired mission accomplishment. Minor errors in signal disposition or adjusting operations IAW existing directives, SRMCC/MCC/MCS guidance and the tactical situation.

8.4.12.2.3. U. Signal search procedures consistently ineffective. Signal analysis consistently inaccurate or excessively slow and prevented mission accomplishment. Failed to disposition signals IAW existing directives, SRMCC/MCC/MCS guidance or the tactical situation.

8.4.13. **Area 241. Mission Crew Supervision:**

8.4.13.1. Q. Effectively supervised all mission crew functions, as applicable, to produce smooth and efficient mission accomplishment.

8.4.13.2. Q-. Supervised mission crew functions, but less-than-adequate mission crew management resulted in minor impact on mission accomplishment.

8.4.13.3. U. Supervision of mission crew personnel was insufficient or nonexistent. Lack of mission crew management had a major impact on mission accomplishment.

8.4.14. **Area 242. Communications:**

8.4.14.1. Q. Thorough knowledge of and compliance with correct communications procedures. Monitored/employed radios as necessary. Transmissions were concise and used proper terminology. Monitored all appropriate communications systems per mission tasking. Used approved COMSEC procedures and employed encryption and authentication correctly. Displayed satisfactory knowledge and use of interphone system.

8.4.14.2. Q-. Occasional deviations from correct procedures that required retransmissions. Occasionally interrupted other transmissions. Used extraneous or non-standard terminology. Demonstrated procedural errors employing encryption and authentication. Displayed limited knowledge of COMSEC procedures. Minor deviations in configuration and use of interphone system.

8.4.14.3. U. Rarely monitored radios or failed to employ them effectively. Responsible for confusion, which jeopardized effective mission accomplishment or caused excessive

delays. Major procedural errors employing encryption and authentication. Displayed inadequate knowledge of COMSEC procedures. Major deviations in configuration and use of interphone system.

8.4.15. **Area 243. Post Engagement:**

8.4.15.1. Q. Thoroughly accomplished or supervised required checks after termination of engagement. Ensured mission equipment was shut down and all loose equipment was secured before landing.

8.4.15.2. Q-. Accomplished or supervised required actions after termination of engagement with minor errors or deviations which did not jeopardize safety. Minor errors or omissions in ensuring mission equipment was shut down and all loose equipment was secured before landing.

8.4.15.3. U. Failed to successfully accomplish or supervise required actions after termination of engagement which could have jeopardized safety. Failed to shut down equipment or secure loose items before landing.

8.4.16. **Area 244. Mission Equipment System Malfunction Analysis:**

8.4.16.1. **Senior Mission Crew Commander, Mission Crew Commander, Mission Crew Supervisor Criteria:**

8.4.16.1.1. Q. Sufficient knowledge of work-around measures or recovery procedures for system malfunctions. Immediately recognized and analyzed malfunction indications and applied or directed the crew/AMT to apply corrective action or recovery procedures as the tactical situation dictated.

8.4.16.1.2. Q-. Limited knowledge of work-around measures or recovery procedures for system malfunctions. Slow to recognize or analyze malfunction indications. Slow to apply corrective action or recovery procedures. Applied corrective actions/recovery procedures at a time impractical for the tactical situation.

8.4.16.1.3. U. Displayed inadequate knowledge of work-around measures or recovery procedures for system malfunctions. Failed to recognize or properly analyze malfunction indications or failed to apply corrective action or recovery procedures as needed. Untimely application of corrective actions/recovery procedures significantly degraded mission accomplishment.

8.4.16.2. **Acquisition Operator, Analysis Operator Criteria.**

8.4.16.2.1. Q. Recognized and analyzed malfunction indications and reported malfunction to SRMCC/MCC/MCS in a timely manner. Recognized impact of malfunction and applied correct and timely workaround to operating procedures.

8.4.16.2.2. Q-. Limited knowledge of work-around measures for system malfunctions. Slow to recognize or report malfunction indications. Less-than-adequate knowledge of malfunction analysis resulted in minor impact on mission accomplishment

8.4.16.2.3. U. Displayed inadequate knowledge of work-around measures for system malfunctions. Failed to recognize or properly report malfunction indications.

Untimely application of recognition/reporting procedures significantly degraded mission accomplishment.

8.4.17. **Area 245. Post Flight:**

8.4.17.1. Q. Thoroughly accomplished post flight duties. Shut down all equipment and stowed gear properly.

8.4.17.2. Q-. Minor deviations or omissions, which would not cause equipment damage.

8.4.17.3. U. Improperly stowed or turned off equipment which could have resulted in damage to the equipment.

8.4.18. **Area 246. Mission Crew Debriefing:**

8.4.18.1. Q. Developed and delivered an effective debrief incorporating at least one debriefing focus point. Led discussion resolving contributing factors, fix(es), root cause(s), and lesson(s) learned.

8.4.18.2. Q-. Minor errors and omissions in debriefing process and delivery. Limited crew interaction and mission reconstruction/data collection resulted in vague lesson(s) learned.

8.4.18.3. U. Errors and omissions in debriefing and delivery. Did not comply with debriefing process and/or did not include crew inputs preventing development of lesson(s) learned.

8.5. Information Collection, Records, and Forms.

8.5.1. Information Collections. No information collections are created by this publication.

8.5.2. Records. The program records created as a result of the processes prescribed in this publication are maintained in accordance with AFMAN 33-363 and disposed of in accordance with the AF RDS located in AFRIMS at **https://www.my.af.mil/afrims/afrims/afrims/rims.cfm**

8.5.3. Forms (Adopted and Prescribed).

8.5.3.1. Adopted Forms. AF Form 8, *Certificate of Aircrew Qualification*; DD Form 365-4, *Weight and Balance Form F – Transport*: AF Form 673, *Air Force Publication/Form Action Request* and AF IMT 847, *Recommendation for Change of Publication*, ACC Form 180, *Temporary Flight Evaluation Certificate*, AF IMT 4031, *CRM Skills Training/Evaluation Form,* AFTO Form 781 *ARMS Aircrew/Mission Flight data Document.*

8.5.3.2. Prescribed Forms. No prescribed forms implemented by this publication.

PHILIP M. BREEDLOVE, Lt Gen, USAF
DCS, Operations, Plans and Requirements

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

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Abbreviations and Acronyms

AAR—Air-to-Air Refueling

ACC—Air Combat Command

ACO—Airspace Control Order

AFI—Air Force Instruction

AMT—Airborne Maintenance Technician

ANO—Analysis Operator

AO—Acquisition Operator

AOC—Air Operations Center

ART—Aural Recognition Test

ASR—Airport Surveillance Radar or Air Strike Request

ATA—Actual Time of Arrival

ATM—Air Turbine Motor

ATO—Air Tasking Order

BIT—Built-In-Test

CC—Commander

CCMCS—COMPASS CALL Mission Crew Simulator

COMSEC—Communications Security

CRM—Crew Resource Management

DF—Direction Finding

DR—Dead Reckoning

EA—Electronic Attack

EARF—Electronic Attack Request Form

EMCON—Emission Option Communications. See T.O. 1-1C-1-29 for specific definitions.

EPE—Emergency Procedures Evaluation

ETP—Equal Time Point

ETA—Estimated Time of Arrival

EWCC—Electronic Warfare Coordination Cell

FE—Flight Examiner

GPS—Global Positioning System

GTC—Gas Turbine Compressor

HQ—Headquarters

IAP—Instrument Approach Procedure

IAW—In Accordance With

IFF—Identification, Friend Or Foe

ILS—Instrument Landing System

INIT—Initial

INSTR—Instructor

IRC—Instrument Refresher Course

KIAS—Knots Indicated Airspeed

LRU—Line Replaceable Unit

MAJCOM—Major Command

MCC—Mission Crew Commander

MCS—Mission Crew Supervisor

MDA—Minimum Descent Altitude

MSN—Mission

NM—Nautical Mile

OFT—Operational Flight Trainer

OPR—Office of Primary Responsibility

OPSEC—Operations Security

PAR—Precision Approach Radar

PIC—Pilot in Command

PME—Primary Mission Equipment

PQP—Previously Qualified Pilots

QUAL—Qualification

RAP—Ready Aircrew Program

RETA—Revised Estimated Time of Arrival

RF—Radio Frequency

RNP—Required Navigation Performance

ROE—Rules of Engagement

SNS—Satellite Navigation Station

SPEAR—Special Emitter Array

SPINS—Special Instructions

SQ—Squadron

TAS—True Airspeed

TOLD—Take-Off And Landing Data

VDP—Visual Descent Point

VFR—Visual Flight Rules

VOR—Very High Frequency Omni-directional Range Station

WST—Weapons System Trainer

Terms

Deviation—Performing an action not in sequence with current procedures, directives, or instructions. Performing action(s) out of sequence due to unusual or extenuating circumstances is not considered a deviation. In some cases, momentary deviations may be acceptable; however, cumulative momentary deviations will be considered in determining the overall qualification level.

Major Error—Departure from standard procedures. Performing incorrect actions or recording incorrect information. Error detracted significantly from mission accomplishment, adversely affected use of equipment, or violated safety.

Minor Error—Departure from standard procedures. Performing incorrect actions or recording incorrect information. Error did not detract significantly from mission accomplishment, adversely affect use of equipment, or violate safety.